



THE UNIVERSITY *of* EDINBURGH

Thesis scanned from best copy available:
may contain faint or blurred text, and / or
cropped or missing pages.

145.2
A PHONOLOGICAL STUDY OF HOKKIEN

by

MARY WAN JOO TAY

Ph. D.

University of Edinburgh

July 1968



CONTENTS

INTRODUCTION

Preliminaries: Methodological	2
Geographical	5
Evaluation of Current Research on Chinese Phonology:	
Theoretical Foundations	9
Dialect Studies	14
Hokkien Studies	17
PART 1: BASIC PHONOLOGICAL UNITS AND THEIR EXTRINSIC ALLOPHONES	
The Syllable: Status of the Syllable	24
Table I: Systematic Table of Initials	25
Articulatory Rules	25
Table II: Systematic Table of Finals	26
Articulatory Rules	26
Table III: Systematic Table of Tones	28
Articulatory Rules	29
Extrinsic Allophones: Status of Zero	31
Initials	31
Finals	34
Defence of a 3-vowel system	37
Oral-Nasal Contrast in Vowels	38
The Word: Status of the Word	39
Enclitics	39
Compounds	43
Loan Words	44

CONTENTS

The Tonal Unit: The Phonological Phrase	54
Table V: Isolation and Sandhi Forms	55
No one-to-one correspondence between isolation and sandhi forms	55
Enclitics as markers of phrase boundaries	58
Phonological and grammatical phrases	60
Emphatic Phrases	63
The Intonation Unit: Pitch phenomena at sentence level	66
Two types of intonation	67
Intonational Devices	68
PART 2: THE RELATION BETWEEN EXTRINSIC AND INTRINSIC ALLOPHONES	
Effect of Combination of Intonation and Tone	72
Assimilations	82
PART 3: SAMPLE TRANSCRIPTIONS	
Text A	94
Text B	98
Text C	102
APPENDIX	
Syllable Types	107
List of Loan Words	153
BIBLIOGRAPHY	159

ACKNOWLEDGEMENTS

I wish to record my sincere thanks to Dr. E.C. Fudge, my supervisor, for his encouragement and guidance during the entire period of this study.

I am grateful to Mr. G.B. Downer, who was kind enough to read through a draft of this thesis and made many helpful and important suggestions which have saved me from various inaccuracies and inelegancies.

To Dr. R.L. Cheng, I am grateful for comments on a draft of this thesis and especially for interesting and valuable comparisons with a variety of Hokkien spoken in Taiwan.

I also wish to thank Miss Sandra Morton who typed the bulk of this thesis so diligently and carefully and Miss Jane Lind who finished the job while Miss Morton was away.

Finally, my thanks are due to my father without whom this thesis could not have been written. He was not only a very patient informant but also helped to fill many gaps in my knowledge of traditional Chinese phonology.

To all my friends who have helped in this work in any way, let me say 'thank you'. If I have misrepresented or distorted what others have written or suggested in personal communications, I alone will bear the responsibility.



Borden's

INTRODUCTION

Borden's

TUB SIZED - AIR DRIED

a

PRELIMINARIES

METHODOLOGICAL

Theoretical Framework:

This study is an attempt at presenting the abstract phonological system which underlies the sounds produced when a Malayan variety of Engchun Hokkien is spoken¹. It is set within a generative framework, but no attempt is made at a rigid formalization of phonological rules. The following theoretical assumptions are taken as basic:

Levels of Representation:

For theoretical purposes, it is desirable to distinguish the following phonological and phonetic levels², although we concentrate on the second of these in this thesis:-

- a. The physical-phonetic level: the range of sounds which may be uttered by speakers (or even one speaker) of Engchun Hokkien is a continuum - the acoustic features of the sound-waves so produced vary so continuously that they can be satisfactorily handled only in terms of parameters which also vary continuously. The study of these features is the task of the phonetician and hence falls outside the scope of this thesis.

1 On the various definitions of Hokkien (also known as Fukienese or Southern Min dialect, Amoy, Hagu and Hoklo) see Chiu (1931a) 245-246; Douglas (1873) vii, 608-610; Lo (1930) 1; on the varieties of Hokkien spoken in Malaya, see Bodman (1955) I. i.

2 See Chomsky (1964). For a detailed explanation and justification of these levels, see Fudge, (1967).

- b. The articulatory systematic phonetic level: Systematic phonetic elements need to be specified in terms of both articulatory as well as auditory features. These specifications must be made on two separate levels - the articulatory systematic phonetic level, and the auditory systematic phonetic level - because one cannot assume a one-to-one correspondence between articulation and recognition. On the articulatory systematic phonetic level, the systematic phonetic elements will be specified by means of articulatory rules which convert the strings of phonological elements into 'ideal articulations' and which 'indicate the way the physical system of articulation is to perform' (Postal, 1968: 273).
- c. The auditory systematic phonetic level: On this level, the systematic phonetic elements will be specified by means of auditory and recognitional rules. As the Jakobsonian distinctive features operate at this level, they are adopted in the rules which state what set of properties of the sound wave are significant in Engchun Hokkien and how the continuum is to be divided up.
- d. The systematic phonemic level: This level is the only level which can handle the basic elements satisfactorily and hence is the chief concern of this study. Grammatical, lexical and phonetic considerations are all taken into account at this level.

Basic Phonological Elements:

It is clear that neither the auditory nor the articulatory features themselves can be taken as the basic phonological elements because the basic

elements must be (a) completely abstract; (b) feature-sized (Fudge, 1967). In the systemic context, the actual articulation consequent upon the selection of a given phonological element and the acoustic and auditory effects of such articulations are of but secondary importance. It is the elements themselves that assume primary importance.

In order to emphasize the fact that the phonological elements are in themselves completely abstract and non-phonetic, they will be indicated by the completely neutral labels such as A, B, 1, 2, a, b, (i), (ii), instead of by labels which are even slightly phonetic or quasi-phonetic.

As we wish to differentiate strictly between systematic phonemic and systematic phonetic levels, care must be taken to ensure that the systematic phonemic elements and their systematic phonetic counterparts are not treated in terms which are formally indistinguishable. The overriding concern is to write phonological rules which highlight the underlying phonological structure.

Organization:

The study is organized into two parts. In the first part, we deal with the basic phonological units and set up realization rules which provide a phonetic representation narrow enough to include 'extrinsic' or 'notional' allophones but not 'intrinsic' allophones (Ladefoged, 1967). In the second part, the extrinsic allophones are related to the intrinsic allophones by means of mutation rules¹.

This particular presentation has the advantage that on the one hand, the difficulty involved in presenting everything in completely abstract

¹ Fudge (1968)

terms for a considerable length is avoided, and, on the other hand, the phonetic realization rules do not get unnecessarily complicated.

In the phonetic realizations, we concentrate on the articulatory realizations rather than on the auditory ones, as the latter can be valid only if a fair amount of experimental findings of fair complexity is undertaken and such complexity is outside the scope of this thesis.

GEOGRAPHICAL

The Engchun or Yungchun 永春 district (hsien 縣) is situated in the southern part of the Fukien province (see Map). The area is about 76 miles wide (East-West) and 30 miles long (North-South).

The district is customarily divided into five villages which are subdivided into seventeen li 里 which in turn are sub-divided into twenty-five to 都. The adjoining districts¹ are:-

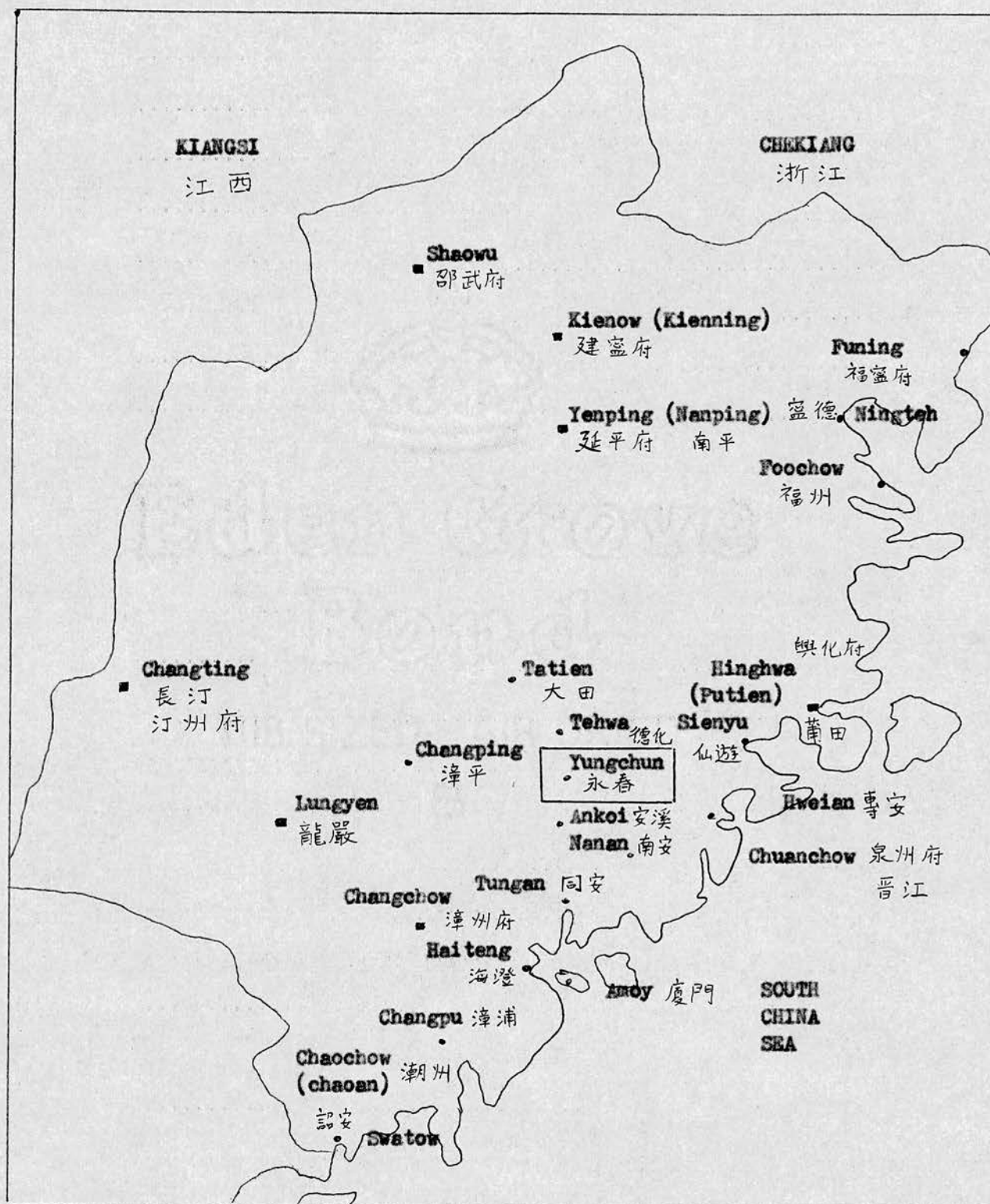
Nanan	or Lām Oa ⁿ	南安	to the East and South-East
Ankoi	or An Khoe	安溪	to the South-West
Changping	or Chhiong Pêng	漳平	to the West
Tatien	or Toā Chhân	大田	to the North-West
Tehwa	or Tek Khoe	德化	to the North-West
Sienyu	or Sian Iû	仙遊	to the North-East

Linguistic Setting:

There appears to be considerable phonetic and phonological differences

¹ There is, unfortunately, no Standardized Romanization for these place names. The transliterations marked on the map are those of the Times Atlas. Alternative forms are cited where relevant.

MAP : THE FUKIEN OR HOKKIEN PROVINCE: LINGUISTIC GROUPS



As from the Times Atlas

between the speech of one village and that of another within the Engchun hsien. One striking difference is that in villages away from the Engchun city centre, there is often a glottal stop final in words which have only a vowel final in Engchun city. For example, the word for 'to bite' is /ka/ in Engchun city, but /kaʔ/ in villages away from the city, especially in those villages near Tek Khoe 德化.

Lexical differences between one village and another also seem fairly evident. The sounds used in imitating the cry of certain small animals tend to vary from one village to another. Thus the cry of the little creature known in Engchun as *am bôe* (蝦蟇) is *li¹ lo¹* in the city, but *tau⁵ tau⁵* far away from the city. Hence the local saying in Engchun city that the *am bôe* in up-country cries *tau⁵ tau⁵*. Onomatopoeic expressions are not the only ones which differ from one village to another. Other examples are: the cicada 蟬 is called *fu⁵ po¹ sai¹* in the city, but *sian⁵* far away from the city; the stomach is called *pak⁴ to²* in one village and *sit⁴ to²* in another; to lose something is *lau²* in one village and *lak⁴* in another; the question word used for asking for names of things is *sia²* *liau³* in one village and *sia² e⁵* in another.

Such differences are undoubtedly very interesting, but they are outside the scope of this study, and are cited here only as a representation of the complexities involved in defining and studying the Engchun dialect.

Informant:

I have used my father as the chief informant of the Engchun variety of Hokkien. He lived in the Engchun hsien in China for nearly thirty-five years before he emigrated to Malaya, where he had lived for nearly thirty-four

years at the commencement of this study. His speech is fairly typical of a large section of the Chinese community of Johore State in South Malaya who speak this variety of Hokkien. Obviously, the Engchun Hokkien spoken by one who has lived so long in Malaya cannot be expected to conform to the Engchun Hokkien spoken by someone living in China. But some attempt has been made to disengage those elements which are considered definitely non-Engchun by the informant. (See the Appendix for the full list of loan words.)

AN EVALUATION OF CURRENT RESEARCH ON THE PHONOLOGY OF CHINESE

During the past fifty years, there has been a considerable amount of research on the phonology of the Chinese language. The present survey seeks to evaluate the important works in this field from three different points of view. It seeks to evaluate firstly, the theoretical foundations upon which the research was based; secondly, the studies on the Chinese dialects; and, finally, the works which deal specifically with the Hokkien dialect.

THEORETICAL FOUNDATIONS

The 'Historical' Approach

The earliest works on the phonology of Chinese were concerned chiefly with the reconstruction of Ancient Chinese. As early as 600 A.D., the Chinese phoneticians and lexicographers had arranged and put together certain rime systems by means of characters. Later, Karlgren in Études sur la phonologie Chinoise replaced these characters by alphabets in order to reconstruct the Ancient Chinese forms. These reconstructions are somewhat similar to the Indo-European reconstructions made in the 19th century. In the realm of historical linguistics, the reconstructions are invaluable, and have been accepted by many Chinese scholars. His Phonologie is a detailed comprehensive study of the Ancient Chinese pronunciation of about 600 A.D., for he has treated all types of consonants and vowels then known to him, although the actual melodic values of the tones he did not investigate in any detail. In the realm of descriptive linguistics, however, Karlgren's work is of limited value, in that his investigations depend too closely on the character or the written form of the language. Grammata Serica is a history of the development of the Chinese script and phonology. Although the

study of the development of writing is a science in itself, it does not follow that it must, in any way, be linked with the study of the spoken language. In all Chinese dialects, certain ideograms have two readings: a colloquial and a literary one. In some dialects, for example, Mandarin, the difference between the two readings is quite insignificant; in others, however, for example, Hokkien, the difference is very marked. Besides, there are literary characters which have no colloquial reading, and there are colloquial words which do not have a character equivalent. It is therefore dangerous to assume that the spoken language can be adequately studied by making reference to a number of characters. It is probably best to start by assuming that the written language and the spoken language are entirely different languages, and to link them together only if and when there is evidence for so doing.

The 'Phonetic' Approach

Although the interest in historical phonology has never been lost even in the more recent phonological works, there have been some attempts at a purely descriptive type of phonology. The most traditional (by traditional we refer to the tradition present among Chinese philologists and linguists) of such approaches is what we term a 'phonetic' approach. One may take Y. R. Chao's Mandarin Primer and Cantonese Primer as being fairly characteristic of this type of approach.

'A syllable in Chinese is made up of three constituents: the initial, the final and the tone, e.g. in Mandarin liang 'cool' l- is the initial, -iang the final and a high-rising pitch pattern over the whole syllable is the tone'. (p. 19)

Chao gives a list of the initials, classified according to place and manner of articulation, and a list of the finals, with full phonetic details about

the way the sounds are produced. Chao also considers the tones of Mandarin in fairly traditional terms: high-level, high-rising, low-dipping and high-falling and gives examples of each of these. Tone-sandhi - 'the change in the actual value of tones when syllables are spoken in succession', (p. 25) is also given and some useful rules are laid down. Stress is also taken account of.

"When a group has three or four syllables, the last has the loudest stress, the first the next and the inside syllable or syllables have the least stress, as hwa ʃsheng 'tarng 'peanut candy'" (p. 26)

This phonetically-based analysis is clearly an advance on earlier works whose chief concern was with reconstruction. Here we see an attempt at analysing a language as it is really spoken. Such an attempt is adequate in providing a way to learn Chinese 'the hard and fast way' (preface, V). It is, however, not quite satisfactory as a phonological statement, that is, as a statement of the underlying system of the language.

Besides Chao's 'phonetic' studies, Kratochvil's studies on the phonetic features and the phonology of stress in the Peking dialect (1962, 1964, 1967) should be mentioned as a special and valuable contribution to Chinese phonology, for he has drawn his conclusions from extensive acoustic measurements. His recent book on the Chinese language today (1968) contains much valuable information on certain neglected aspects of phonology, such as the shape the pitch contour takes as a result of the influence of intonation on tone.

The 'Taxonomic Phonemic' approach

The phoneme theory which was hailed with great enthusiasm in America in the 1930's was applied to the study of the Chinese language when Hartman (1944) and Hockett (1947) 'phonemicized' the Mandarin system. These

phonemicizations were received with great interest in the American linguistic circle, but seem to have had little influence in a debate during 1957 and 1958 among a group of people centered at Peking (Chang, C.: 1957; Chéng, 1957; Hsü, 1957; Chou, 1958; Fu, 1957).

It is true that the impact of the phoneme concept has been felt in linguistic studies in China for some time now. The term 'yin-wei' (or phoneme) has occurred more and more frequently in the literature. It is only in recent years, however, that any serious attempt has been made at a phonemic interpretation of the sound system of a dialect.

The debate mentioned above concerned the proper criteria for phonemic grouping. A few were in favour of complementary distribution, but the general opinion was that the 'social function' of the language, i.e. the phonological intuition of the common speakers of the language was of prime importance.

The importance of these works lies in the fact that the conclusions reached through the debates were finally taken into account in the new romanization system.

The 'Polysystemic' Approach

An entirely different approach has developed among some linguists working on the Chinese language in Great Britain. The Firthian or polysystemic approach to phonology was initiated by J. R. Firth and applied with varying degrees of success to several Chinese dialects by Firth and Rodgers (1935-37), Halliday (1959) and Scott (1947, 1956). In this approach, the basic units are phonematic units. Most Chinese dialects, certainly Pekingese, are characterized by the extreme limitation of the syllable structure. Hence, the usefulness of such an approach. The syllable is essentially a phonological unit, not a phonetic one.

Three points or positions are recognized in such syllables: C V (Final). To C corresponds the combination of articulatory features represented in linear phonetic transcription as (initial) consonant and semi-vowel; to V and F those represented as vowel and (final) nasal consonant or semi-vowel respectively. Each position is further characterized by certain prosodies, e.g. in Mandarin by the y- feature (tongue forward and raised) and the a- feature (with neither of these characteristics).

The advantage of such a polysystemic approach is that it makes explicit the important feature present in every language that the types of sounds occurring in different places in a system differ according to their place in the system, i.e. what occurs in place C does not occur in place V, what occurs in place V does not occur in place F and so on.

The usefulness of such an approach, however, has yet to be proved in the sense that, apart from Halliday's work, the only works on Chinese phonology which make use of such an approach are very sketchy, dealing only with the syllable spoken in isolation, with no consideration of what happens in connected speech.

The 'Distinctive Features' Approach:

Although it is quite usual in current literature to associate 'distinctive features' with 'generative phonology', we shall evaluate these two approaches separately, for, on the one hand, there has been an attempt at a distinctive feature analysis of Mandarin which does not seek to be generative (Wong 1953, 1954) and, on the other hand, there has been an attempt at a generative approach which hardly utilizes any distinctive features (Cheng 1966).

Wong's article is important, in so far as it represents the first attempt to use 'distinctive features' for Chinese. It is also satisfactory in so far as the features set up account for distinctions at the auditory systematic phonetic level. The features are:

Interrupted - Continuant : p ph - f; t c th ch - s; k c kh ch - s

Strident - Mellow : c - t; ch - th; c - k ch - kh

Tense - Lax : ph - p th - t ch - c kh - k ɕh - c h - /

Nasal - Non-nasal : p ph f - m; t th l } n ; k kh c ch s -ŋ
c ch s }

The analysis of tone in distinctive features and generative phonology (Wang (1967) is important in that it is extensive enough to cover most, if not all, Chinese dialects, but suffers somewhat from a confusion between the systematic phonemic and the auditory systematic phonetic levels.

The 'Generative' Approach:

Cheng's work mentioned above is important in that it attempts to link the phonological structure of Mandarin with the syntactic component of the grammar of Mandarin. The finer details, however, have yet to be worked out, so that any evaluation at this stage is necessarily of a tentative nature.

DIALECT STUDIES

Dialect study is a relatively new undertaking in the realm of Chinese phonology. The Natural Research Institute of History and Philology, Academia Sinica was founded in 1928 and ever since then, it has, under the leadership of Y. R. Chao, carried on a project to investigate the dialects of the whole country. There has also been a very extensive survey of dialects in mainland China in recent years (Chao, et al., 1948). The

usefulness of these dialect studies is best evaluated under the following headings:

'Comparative' Studies:

As Tung (1961) points out, dialect studies prior to the period 1950 - 1960 have the following features in common:

1. The main part of the material is a list of words, from about 600 to over 3,000, selected from a viewpoint of comparative phonology from the old 'riming dictionary' Ch'ieh Yun on which our knowledge of Ancient Chinese is based.
2. In addition to a descriptive analysis of the sound system, there are comparisons with both the Mandarin and the Ancient systems.
3. Except in the intensive treatments of a dialect in a few cases, only a small number of words or phrases from the 'basic vocabulary' are recorded for each dialect.
4. Texts are very few.

The overriding concern with the pronunciation of the Chinese syllabary in the different dialects is evident in a considerable number of works (such as those of Tipson (1951), Jen (1952), Whitaker (1953) and S. L. Wong (1941). The limitations of such an approach have already been discussed above.

In recent years, dialect studies in mainland China have inevitably been undertaken with a view towards helping the dialect speaker to speak the 'common language' properly. Hence, the impressive collection of articles on the Chinese dialects as compared with the common language; 'Fang yen yü p'u-t'ung-hua chi K'an, 1958); hence also the language-teaching manuals produced for various dialect speakers (Kao & Liu, 1956).

These comparative dialect studies no doubt play an important role in facilitating the learning of the 'common language' and in the study of comparative philology. But so often they are so concerned with comparisons

with Ancient Chinese and the common language that lucid descriptive statements of the language have no place in the dialect studies. The lack of texts in such investigations is, in particular, a serious disadvantage with such studies.

'Descriptive' Studies:

Although the above method is still found in the most recent works, there seems to have developed a new trend of dialect studies in China.

The works of Chao on the T'aishan dialect (Chao: 1951) of Tung on Hakka (1948) and Hokkien (1957, 1959) and of Egerod on the Lungtu dialect (1956) use a method completely different from those of 'the comparative' studies cited above. In these investigations, there is no pre-arranged word list or syllabary to be read aloud. Material was collected in the way usual with an unwritten language: the informant was asked to talk about anything. Emphasis was laid on 'discourses' and investigations were based on the transcriptions made.

In these descriptive studies, we have, for the first time, attempts to know the dialect as it was spoken, regardless of the writing system and its relationship with the Ancient language and other related dialects.

The value of such studies cannot be overestimated. They result in sound linguistic analyses, and are an important contribution to Chinese Dialectology. As Tung puts it,

'Students of Chinese linguistics have always believed that a sounder and more fruitful comparative study of modern dialects will develop when we are able to lay its foundation on separately treated descriptive data'. (Tung, 1961, p. 219)

An important work along this line is Tung's Szu-ko Min-nan Fang-yen (or Four Southern Min Dialects).

Dialect Surveys:

In recent years, the Institute of History and Philology, Academia Sinica in Formosa has started to publish the results of extensive surveys of large dialect areas carried out in previous years.

Mainland China, prompted by its project of reforming the writing system and the promotion of the p'u t'ung hua or common language, started in the 1950's an immediate 'general survey' of all local dialects.

The value of these surveys lies in the practical information it gives and in broadening knowledge of the dialects in general. The serious disadvantage of these surveys is that too gigantic a task has been attempted by too few trained men. In order to hurry up the surveys, amateurs - college students and local school teachers - were recruited after a very short period of training. So it is that one has to read these surveys very carefully for many of them are bound to be scientifically unsound or at least unreliable.

HOKKIEN STUDIES

Amoy

The study of Hokkien, known variously as a Min dialect or Dialect (in the broad sense) or Hagu, was first undertaken by foreign missionaries. Rev. Dr. Medhurst in A Dictionary of the Hokkien Dialect, for the first time, collected the native sounds of Chang Chou (漳州). He based his work not on actual living speech, but on the common native phonological book of Chang Chou known as 'Sip-ngo-im' or (十五音) 'Shih-wu-yin'. The result was that his material contains the literary pronunciation of Chinese characters rather than actual speech. He did put in some of the colloquial pronunciation of Chang Chou and Chang P'u, but they are, as Douglas remarks, far from being exact. In spite of Medhurst's contempt for contemporary work

and a rather poor classification of initials and finals, he has some useful remarks to make about the systematic correspondences between the reading and the colloquial forms of speech (vii, lxi).

Several years later, Rev. Carstairs Douglas published a dictionary entitled Chinese-English Dictionary of the Vernacular or Spoken Language of Amoy. Although Douglas' dictionary was based on several manuscripts by other people (he made use of J. Lloyd's Vocabulary of the Vernacular of Amoy, Doty and Macgowan's Manuals of the Vernacular of Amoy, Alexander Stronach's Dictionary of the Vernacular of Amoy, and various phonological works such as Shih Wu Yin), it is a very significant contribution, because it was the first dictionary to be based on actual living speech. As a dictionary, it is quite comprehensive even today. Douglas obviously knew the language very well, having been at Amoy for nearly twenty years when he wrote the Dictionary.

The importance of Douglas' dictionary also lies in the remarks in the Preface, Introduction and Appendices. Douglas takes great pains to describe the tones of Amoy, giving detailed phonetic descriptions of each of the tones (xiii - xiv). As his analysis and system of marking the tones has been accepted as 'the' system of romanization for the transliteration of Amoy (if romanization is used at all), it is useful to have a summary of it below:

NAME OF TONE	TONE-VALUE	TONE-MARK
First tone : Upper first (chīu ⁿ -pia ⁿ) Lower first (ē-pia ⁿ)	High level Falling-rising	to tô
Second tone : ——— (chīu ⁿ -sia ⁿ)	Rising-falling	tô
Third tone : Upper third (chīu ⁿ -khi) Lower third (ē-khi)	Low-falling Low level	tò tō
Fourth tone : Upper fourth(chīu ⁿ -jip) Lower fourth(ē-jip)	Rising-falling Abrupt rise	toh tôh

h is used to mark a syllable ending in a stop.

Douglas also discusses what happens to the tones in combination (xiv - xv). The following is a summary:

'When a word stands first in a group of two, of which the second has the strong accent, then the first word experiences a very marked change in its tonal inflection'. (xiv)

1st Upper 1st	┘ → ┘	(in some places) ┘ (in others, e.g. Tāng-ōa ⁿ)
2nd lower 1st	┘ → ┘	
3rd second	┘ → ┘	
5th upper third	┘ → ┘	
6th lower third	┘ → ┘	
7th upper fourth	┘ → ┘	
8th lower fourth	┘ → ┘	

What Douglas terms 'accent' is probably what would be termed 'stress' in modern phonetic terminology. He is of the opinion that:

'As all the words in the language are monosyllables, they are usually grouped together in groups of regular form and regular accentuation. These groups of two, three or four words (and sometimes of more) are often so absolutely fixed in the usage of the language as to become very similar to the polysyllabic words of other languages; and

within such groups the laws of accent in relation to several words are quite as strict as the accentual laws for the several syllables of the words in polysyllabic languages. The general rule is that the primary accent falls on the last word of a group of two, three or more words'. (xv)

He has similar rules for groups of three and four words (xv - xvi). He has also a useful section on enclitics (611) and the variations among the sub-dialects of Chang-Chew and Chin-Chew and Tung-An (608 - 611). No doubt the variations are not as simple as he seems to suggest. Thus the Engchun variety is said to have 'in most parts nearly the same form of dialect as Chin-chew' (610). Yet there are significant differences from Chin-Chew and significant similarities with Chang-Chew and Tung-an and even Amoy.

Douglas's dictionary became even more useful after Barclay published a supplement to it in 1923. While Douglas's dictionary consists only of English explanations of Amoy words, another, that by Campbell (1913) consists only of Chinese explanations of Amoy words, and hence the two could be used together very profitably.

Another significant work in the investigation of Hokkien is Lo Ch'ang Pei's monograph Hsia Men Yin Hsi. Lo's monograph is strongly biased towards historical phonology, but, as his is one of the very few works on Hokkien, it is necessary to evaluate it too. His aim in writing the monograph is expressed in his own words, thus:

'it seems . . . still worth while now to take up the work of comparing this dialect with the sound system of the Ch'ieh Yün (切韻) with a view to get some clue to the sounds of Archaic Chinese from their relation to each other'. (p. ix).

The first part of his monograph is a phonetic study of the Dialect of Amoy (by which he means the speech of Amoy and Kulangsu, based on the speech of a Mr. Lin, who was born in Amoy, and had lived there for more than twenty years when he was used as an informant. Lo concludes that there are twenty

initials, fifty-seven finals and seven tones. He describes the sound values of the tones in phonetic terms and deals with such features as assimilation, absorption of consonants, enclitics and changes of tones in combination.

The second part of his monograph is meant to be a phonological study of the Amoy Dialect, but what Lo has done is simply to use a simplified system of notation, by which he dispenses with all diacritical marks and indicates tones by the letters of the Roman alphabet, i.e. he uses tonal spelling. As other Hokkien scholars have devised different systems of tonal spelling, Lo has a table comparing these divergent systems (36 - 39). This is indeed useful for purposes of comparison.

The other parts of the monograph consist of a comparative study of the Dialect of Amoy with historical phonology and tables comparing the sounds of Amoy with the Shih Wu Yin and the Kuang Yün.

In the realm of historical linguistics, Chiu Bienming has also made some contribution. He has made comparisons between Hagu and the Ts'ie-yun and in the light of these comparisons attempted reconstructions of the ancient initials somewhat different from Karlgren's. Chiu's other interests include etymology - the business of which is

'to sort out the thó from the pe' and bún words¹, and to identify the Chinese elements with their correct Chinese characters' (1931 a 253)

and also an interest in tonal spelling. Perhaps what is most relevant for descriptive linguistics today, however, is his experimental phonetic study of tone behaviour in Hagu (1931 b).

Lastly, a survey of the works on Hokkien would not be complete without mentioning the contribution made by Bodman, whose book Spoken Amoy Hokkien, being the only significant work on the Hokkien spoken in Malaya, has provided

1 thó or thó-ōē 土話 are the aboriginal words; pe' or pe'ōē 白話 are everyday words and bún or bún-gien 文言 are literary words.

a useful source with which to check, especially on questions of Malayan usage and idiom. Although the book takes the form of a language-teaching manual rather than that of a conscious linguistic description, it contains much valuable information on the structure of Hokkien spoken in Malaya. Further details of the use made of Bodman's work in our study will become evident in later sections of the thesis.

The survey made above does not claim to be a thorough one of all the works in Chinese phonology. But it has dealt with the most significant ones and shown how little has been done on Chinese phonology in general, even less on Hokkien phonology, and nothing at all on the Engchun variety of the dialect.

BASIC PHONOLOGICAL UNITS

AND THEIR

EXTRINSIC ALLOPHONES

THE SYLLABLE

Status of the Syllable:

The syllable as described below is a phonological unit, not a phonetic one.

Perhaps a note on the status of the syllable is relevant here. As our concern is to present the abstract system which underlies the sounds produced when Engchun Hokkien is spoken, we shall set up the syllable primarily on the basis of what occurs in the stream of speech and take into account etymological considerations only where these help to simplify or highlight the description of the underlying structure. Thus we take into account both what etymologists call the 'reading or literary' pronunciation as well as the 'colloquial or popular' pronunciation. The correspondences, regular, semi-regular or irregular which occur between these two types of pronunciation form an interesting field of study and have been the concern of many Chinese scholars¹.

The structure of any syllable in Engchun Hokkien may be represented by the formula: Initial + Final and a specification of tone.

¹ See, for example, Chiu (1931 a) 252 - 4; Bodman (1955) 345 - 347; Medhurst (1832) vii, lxi.

TABLE IISYSTEMATIC TABLE OF FINALS

S	V	F
ϕ -	H	$\overbrace{P} \cdot$
y -	M	T C
w -	L	K ~

Table II above shows that the system of finals is made up of three separate sub-systems, namely S(emi-vowel), V(owel), and F(inal Consonant or Close Vowel)¹. As there are systematic restrictions of co-occurrence between elements belonging to these three sub-systems (see Table IV), we find it economical to treat them under one main system, that of finals in the traditional sense of the word.

Articulatory Correlates of the Semi-vowel System

To w- corresponds the articulatory correlate of lip-rounding and velarization; to y- corresponds the articulatory correlate of palatalization. Articulatory rules could be set up as follows:

w --> lip rounding; back of tongue highest

y --> front of tongue highest

¹ For a similar treatment of F in terms of vowel-final, (our)nasal-final (our ~) and consonant-final (our C), see Lo (1930): 10.

It is perhaps helpful to note that this system of semi-vowels corresponds to what is known in traditional Chinese philology as medials. Thus syllables with a w- in their semi-vowel system are described as syllables with medial u, those with a y- in their semi-vowel system as syllables with medial i, and those with neither y- nor w- as syllables without medials. As in traditional Chinese philology, we find it more accurate to treat the medials as a part of the final, rather than as a part of the initial or of the whole syllable.

Articulatory Correlates of the Vowel System¹

H	-->	Tongue high
M	-->	Tongue half-low (as in ə, e, o) Tongue low (as in ɔ)
L	-->	Tongue low

In open syllables, there is the possibility of neutralization of H/M (see Table IV A and Defence of a 3-vowel system).

In addition to these specific articulatory features, there is the general articulatory feature of a raised velum which holds good for High, Mid and Low. For various reasons which will become obvious in later pages, we find it simpler to treat the articulatory contrast between a raised and a lowered velum under the sub-system of final consonants than under the vowel system.

¹ Our treatment of the vowels in terms of a three-term vowel system resembles to some extent Hockett's treatment of Peking vowels (Hockett, 1947).

Articulatory Correlates of the Final Consonant System

The brackets in this system enclose simultaneously present features.

The articulatory correlates are as follows:

P ----> Bilabial

T ----> Dental

K ----> Velar

How these are realized as different consonants and vowels is shown in Table IV.

. ----> Non-consonantal

C ----> Consonantal

~ ----> Velum lowered

TABLE III

SYSTEMATIC TABLE OF TONES

	Even	Rising	Going	Entering
Upper	1	2	3	4
Lower	5		7	8

The basic phonological units of tone are best studied against the background of traditional Chinese philological practice, namely, an eight-tone system divided into an upper and a lower series whose nomenclature is as above¹. Whether these tone-names indicated actual tone values (i.e. pitch values over a syllable) several centuries ago or whether they are just labels (Martin 1953) is beside the point. What is important, however, is that as basic phonological elements, tone 1 is simply tone 1, tone 2 is simply tone 2, and so on, and have absolutely no properties which are even remotely phonic. Actual phonic properties come in only at the systematic phonetic levels.

At the auditory systematic phonetic level, tone phenomena might be dealt with in terms of features² such as rise, fall, high, low (W.S.Y. Wang: 1967: 97). At the articulatory phonetic level, they might be dealt with in terms of features such as vocal cords tense, vibrating at frequency which is high/low, remaining constant/increasing/decreasing throughout the syllable.

For our present purpose, we choose to correlate the basic tones with Y. R. Chao's pitch-graphs (measured on a scale from 1, the lowest pitch, to

- 1 The advantages of relating the tones in Engchun Hokkien to this 8-tone system are (i) that it facilitates comparison with other Chinese dialects also set against this system. (See, for example, for Cantonese, Chao (1947) 24-25; for Mandarin, Chao (1948) 25; for Amoy, Chiu (1931 a) 267, Lo (1930): 19-22; (ii) that it takes into account the central motif of Chinese phonology, i.e. the rhyming principle which is based on tone-classes rather than on actual pitch value of the tones, so that, for instance, the 'upper even' and the 'lower even' rhyme with each other but 'even' may not rhyme with 'rising', 'rising' may not rhyme with 'entering' and so on. On the reconstruction of 'tone-classes' from pitch-values and rhyming principle of a Sui dialect, see Li, F. K. (1948; 1949).
- 2 Other features suggested by Chiu (1931 a: 269 - 270) are: (i) length or quantity: long-short; (ii) direction and form of glide: big-glide+small glide-zero-glide. In our treatment of tone, length is handled as a correlate of tone-type: 'long' tones with non-entering tones, 'short' tones with entering tones. 'Glide' is a redundant feature and hence not dealt with in our treatment.

5, the highest pitch) rather than with features like those mentioned above, because Chao's pitch-graphs have the advantage of being more illuminating (better mnemonically) and being much easier to cite, besides the fact that most of the studies on the tones of Chinese dialects have used Chao's graphs¹.

The correlates of the tones are as follows:

/Tone 1/	→	↑ 44:		
/Tone 2/	→	↘ 51:		
/Tone 3/	→	┘ 11:		
/Tone 4/	→	↘ 32:		
/Tone 5/	→	↗ 24:		
/Tone 7/	→	┘ 11:		
/Tone 8/	→	↗ 24:	in env.	/p t k/
		┘ 55:	in env.	/ʔ /

These contrasts hold good only at the syllable level. At the phrase level, there are other extrinsic allophones (see section on The Tonal Unit). It should also be noted that identical correlates at the syllable level (tone 3 and tone 7) are best treated as realizations of different abstract elements, as further complications at phrase level render the treatment as realizations of the same abstract element impossible.

¹ For pitch-graph representations of Amoy Hokkien, see Bodman (1955: I. 3); Tung (1959: 740 - 1); Lo (1930: 22). The chief differences between the tones of Engchun and Amoy Hokkien are: (i) in Engchun, tones 3 and 7 are identical (both 11:) in citation form but in Amoy, Tone 3 is realized as low (11:) and tone 7 as mid (33:). (ii) in Engchun, Tone 8 is realized as low rise (24:) or high (55:) depending on whether the final consonant is a stop or a glottal stop respectively; in Amoy, no such distinction seems to be necessary.

Extrinsic Allophones at Syllable Level:

The Status of Zero:

The possibilities of manner and place of articulation for C(onsonant), S(emi-vowel), V(owel) and F(inal Consonant) include a zero in all the systems except in that of V. One might possibly regard [u], the mid back unrounded vowel as the realization of a zero in the vowel system, but this zero at the phonological level is not to be confused with that of zero at the phonetic level which is characterized by silence.

Initials:

l/d: This sound is produced by a rapid flap of the tongue tip. It is extremely difficult, from the perceptual point of view, to determine whether it is more accurately represented by [d] or [l]. We choose [l] rather than [d] largely because the more l-like pronunciation has a wider distribution than [d], where the distribution is stateable¹.

j/dz: The distribution of these two extrinsic allophones is much clearer than that of [l] and [d]. It may be stated as follows:

¹ The whole question of a d/l variation is an extremely complex one. Bodman's suggestion that the particular variety of the l sound may differ according to the speaker seems a reasonable one (1955: I. 121). My father, for instance, used a more l-like pronunciation in all closed syllables and a more d-like pronunciation only in some open syllables, the conditions of which are difficult to state. He went so far as to insist that in Engchun Hokkien, one never uses a [d]. Another informant I had, however, had much freer variation between [d] and [l].

/II B 3/ --> [j] / high front vowel
[dz]

Examples: [jiɔŋ⁵] 戎 [jiəŋ⁵] 仍 [jin⁵] 人 [jit⁸] 日 [jien⁵] 然
[jia¹] 遮 [jiu⁵] 柔 [jiau²] 爪 [jiau⁷] 尿 [jim³] 刀
[jim²] 忍 [jim⁵] 森 [jiam⁵] 染
[dzun⁵] 如 [dzu⁷] 裕 [dzue⁷] 銳

j/l: These two initials were kept separate by my informant, very consistently. There were minimal pairs like:¹

[jip ⁸]	入	'to enter'	[ji ⁷]	二	'the second'
[lip ⁸]	立	'to establish'	[li ⁷]	離	'far away'

b/m; l/n; g/ŋ

These pairs of extrinsic allophones² may be accounted for by the following specification for all initials in Engohun Hokkien:

1 For other examples of minimal pairs, see Appendix 1.

Bodman's comment in connection with the distribution of [l] and [j] is again very helpful. He suggests (1955: I. 121) that they are normally kept separate in most of the regional pronunciations of the language of Southern Fukien but speakers from the city of Amoy generally do not distinguish them. Our impression is that the distribution may have something to do with age; we noticed a tendency for speakers of the present generation to use a [l] where speakers of an older generation would use [j]. Douglas (1873: 610) notes that 'The dialect of Chin-chew city and of Chin Kiang j is often pronounced very thick so as to change to l or very nearly so'. Lo's informant (1930: 8) who lived in Amoy for more than twenty years makes no distinction between [j] and [l].

2. For similar treatments of these pairs as allophones rather than as separate phonemes, see Bodman (1955) I. 183-4; Lo (1930) 17-18. An attempt has been made by Peng (1966) 411-416 to phonemicize m, n and ŋ in a different way but this attempt suffers somewhat from its monosystemic approach which treats m, n, and ŋ together with initial m, n and ŋ, and from the fact that it is based on a dialect different from Bodman's (and considerably different from ours).

/3/ → { Voiced affricate (when combined with II B)
Voiced nasal (when followed by nasalized vowel)
Voiced lateral (when combined with II A and not followed by nasalized vowel)
Voiced stop elsewhere

How the oral vowel-nasal vowel contrast operates in certain syllable types and not in certain others will be illustrated later. Some examples of the extrinsic allophones cited above are as follows:

[ba ⁷]	'a yard'	[la ⁷]	'to stir things'	[gi ⁷]	'noble'
[mã ⁷]	'to scold'	[nã ⁷]	'if'	[ɲĩ ⁷]	'stiff'

Relation between Initials and Tone:

The original sub-division of four tone-classes into eight tone-classes according to whether the initials were 'voiced' or 'voiceless' is reflected to a certain extent in Hokkien. While we do not have sufficient grounds for classifying initials into two rigid series: upper-tone initials and lower-tone initials (as Chao has done for Cantonese, See Chao (1947: 20), we nevertheless note that there is a fairly strong tendency for the voiced initials to co-occur with the lower series of tones (i.e. tones 5, 7 and 8 in our study) and the voiceless aspirated initials to co-occur with the upper series of tones (i.e. tones 1, 2, 3, 4 in our study). On the basis of this tendency, one could classify tone 2 syllables with voiced initials as tone 6, although this classification is complicated by the fact that tone 6 has split into various tone-classes such as tone 7 (see Chiu (1930 a: 296-8)).

Finals:Relation between Finals and Tone:

In Ancient Chinese, the entering tone (ruh sheng) contained all the words ending in a final stop consonant, more specifically, in -p, -t, -k. As Downer (1963: 134) has rightly pointed out 'these words could be treated either as the fourth tone in the table of words with the same vowel, and homorganic nasal final (e.g. -uŋ, -uŋ̃, -uŋ̣, -uk) or in tables of rhymes ending in a comparable open vowel (e.g. -ū, -ū̃, -ụ̄, -uk)'. So long as the syllable did not have a glottal stop, this treatment of the entering tone was fine. In our study, however, we have to consider syllables with glottal stops as well. Etymologically, these syllables belong to the colloquial pronunciation only and not to the reading pronunciation. As our concern is with the stream of speech, rather than with etymology, we give such syllables equal status with the reading pronunciations. We regard the glottal stop as a correlate of tone, like -p, -t, -k and extend the use of the term 'entering tone' to syllables ending in a glottal stop as well. Thus for syllables with a consonantal final, the entering tone correlates with the corresponding homorganic stop while for syllables with a non-consonantal final, the tone correlates with a glottal stop (see Table IV below).

Relation between Finals and Initial:

Initial bilabials and final -m or -p do not co-occur.

TABLE IV A

FINALS WITHOUT NASALIZED VOWELS

	C - K	H/M L	C - T	H/M L	C - P	H/M L
Tones other than Entering	ɸ- w- y-	əŋ aŋ ɔŋ iəŋ iɔŋ		ən an un uan in ian		əm am _____ im iam
Entering Tone	ɸ- w- y-	ək ak ɔk iək iɔk		ət at ut uat it iat		əp ap _____ ip iap
	. - K	H M L	. - T	H M L	. - P	H M L
Tones other than Entering	ɸ- w- y-	u ə a ɔ ua ia		i e ai ui ue uai _____		u o au _____ iu io iau
Entering Tone	ɸ- w- y-	u? ə? a? ɔ? ua? ia?		i? e? ai? ui? ue? uai? _____		u? o? au? _____ iu? io? iau?

TABLE IV B

FINALS WITH NASALIZED VOWELS

	\tilde{K}	H/M	L	\tilde{T}	H/M	L	\tilde{P}	H/M	L
Tones	$\phi-$		\tilde{a}		\tilde{i}	\tilde{ai}			\tilde{au}
other	w-	$\tilde{\phi}$	\tilde{ua}		\tilde{ui}	\tilde{uai}			
Entering	y-		\tilde{ia}					$\tilde{i\ddot{u}}$	$\tilde{ia\ddot{u}}$
Entering	$\phi-$		$\tilde{a}?$		$\tilde{i}?$	$\tilde{ai}?$			$\tilde{au}?$
	w-	$\tilde{\phi}?$	$\tilde{ua}?$		$\tilde{ui}?$	$\tilde{uai}?$			
Tone	y-		$\tilde{ia}?$					$\tilde{i\ddot{u}}?$	$\tilde{ia\ddot{u}}?$

TABLE IV C

FINALS WITH NASALIZED VOWELS (AN ALTERNATIVE)

	\sim	H/M	L
Tones	$\phi-$	\tilde{i}	\tilde{a}
Other than	w-	\tilde{ui}	\tilde{ua}
Entering	y-	$\tilde{i\ddot{u}}$	\tilde{ia}
Entering	$\phi-$	$\tilde{i}?$	$\tilde{a}?$
	w-	$\tilde{ui}?$	$\tilde{ua}?$
Tone	y-	$\tilde{i\ddot{u}}?$	$\tilde{ia}?$
Marginal:		\tilde{uai}	$\tilde{ia\ddot{u}}$
			$\tilde{\phi}$

Defence of a 3-vowel system:

Restrictions of co-occurrence between vowel and final consonant have suggested the possibility of 'economising' our description by setting up a 3-vowel system. Such a system has the distinct advantage that it is 'simple' in the sense that it has very few gaps and most of these gaps are systematic ones such as the following:

(1) that rounding in both S and F is not possible, thus the following syllables cannot occur in Hokkien: um, uam, up, uap, uu, uo, uau, uu?, uo?, uau?. (2) that palatalization in both S and F is not possible, thus the following syllables cannot occur in Hokkien: ii, ie, iai, ii?, ie?, iai?.

The phonetic tie-up with this three vowel system holds good most of the time. The phonologically low vowel /a/ which is also phonetically low has by far the widest distribution. The only combinations not possible with /a/ are /uaŋ/ and /iaŋ/¹. We thus economise by handling [ɔŋ] in place of [uaŋ] as a low vowel with a glide involving a back vowel, and [iɔŋ] as a low vowel with a glide involving a front vowel.

In syllables with C or ~ in place F, the distinction between high and mid vowels is neutralized. [ə] is set up as the principal H/M vowel in such syllables; [un] is handled in terms of the rounded (w-) version, of [ən]; and [in], in terms of the palatalized (y-) version, of [ən]. [iɔŋ] is sometimes heard as [eŋ] or [ieŋ]². In any case, it is economical to

1 Lo (1930: 10) treats these as rare. In our treatment, however, they exist as loans, forming a coexistent phonemic system (Henderson, 1951) in the language. See section on Loan Words.

2. Bodman (1955: I. 168) treats ie in iek and ieng as the spelling convention for phonetic [i]. In Engchun Hokkien, however, ie is nearer to [e] than to [i].

treat this as the palatalized version of [ə].

In syllables with . in place F, the situation is a little more complex. There are three high vowels:- [u], [i] and [ui] and three mid vowels:- [ə], [ɔ] and [o]. The phonologically mid vowel [ɔ] is phonetically low. Their assignment to their places in Table IV again highlights the systematic gaps.

Oral-Nasal contrast in vowels:¹

The contrast between oral and nasal vowels operates in syllables where the final is zero or non-consonantal. Our term 'non-consonantal' excludes the glottal stop, which, as we have shown above, is a correlate of tone rather than a place of articulation. The contrast does not operate in syllables where the final is consonantal; in such syllables, only non-nasalized vowels occur. All the nasalized vowels are shown in Table IV B and C. Table IV B is more comprehensive than Table IV C. It takes into account [ĩau] and [ũai] which are marginal to the system in the sense that such syllables are mainly onomatopoeic or expressive in nature. It can also take into account [ãu], [ãi] and [ɔ̃] which are of very restricted occurrence (see Appendix). Table IV C is offered as an alternative to Table IV B. The simplicity of the system with no gaps in it recommends it to some extent.

¹ I am much indebted to G. B. Downer for suggesting the handling of this oral-nasal contrast in terms of syllable types.

THE WORD

Sinologists and linguists have argued among themselves for years as to whether it is necessary to set up the word as a basic unit in Chinese¹. While we are of the opinion that the word is necessary as a grammatical unit, a detailed justification of this viewpoint is outside the scope of this thesis which is concerned with phonology. In the following section, we shall therefore limit discussion to a few fragmentary remarks on certain phonological phenomena which might be relevant in setting up the word as a unit in Hokkien:

Enclitics²

When two syllables are juxtaposed together in such a way that the tone of the second syllable is realized as the tail end in the pitch contour of the first syllable, it is perhaps convenient to handle these two syllables as a single unit which we might call the phonological word. The pitch of such second syllables known as encliticised or atonic or neutral tone syllables may be represented graphically as follows, by placing a dot before the syllable so realized:³

•	Mid	after 1st tone
•	Low	2nd
•	Low	3rd

1 For some reasonable arguments in favour of setting up the word as a basic grammatical unit in Chinese, see Halliday (1959: 59, 66-8); Kratochvil (1968: 88-89); Bodman (1955: 152-4).

2 For a treatment of enclitics in Hokkien, see Douglas (1873:xiv); Lo (1930: 22-4); Chiu (1930: 273); Bodman (1955: 4). An important distinction between their treatment and ours is that while they regard the enclitic as a 'low, falling-away, dying tone', irrespective of the tone of the preceding syllable, we regard the realization of the enclitic as being dependent on the tone of the preceding syllable.

3 Following Chao (1948: 27).

˩	Low	4th
˨	High	5th
˨	Low	7th
˨	High	8th

Syllables realized by enclitics are of two types:

1. Habitual enclitics: those which are always realized by enclitics and never by isolation and sandhi-tone forms¹.
2. Conditioned enclitics: those which are realized by enclitic tone-forms only in certain positions, and by sandhi- or isolation- tone forms elsewhere.

Habitual enclitics:

These consist of:

(i) Mood particles:

a	阿	interrogative, exclamatory and indicative
la	啦	indicating completed action
ma	嗎	interrogative
le	—	used in conversation as a mark of informality
lo	咯	indicating completed action, also used in enumeration
o	—	emphasizing affirmation
e	—	indicating surprise
ni	呢	used in enumeration, interrogative
tit	得	indicating possibility and probability
kio	—	indicating affirmation, agreement

¹ See section on tonal units for a description of isolation and sandhi tone-forms.

(ii) Negative suffixes:

bo ⁵	無	Not
bue ⁷	不會	Not able
ba ⁷	未	Not yet

Conditioned Enclitics:

These include various classes:

(i) Nouns, especially those expressing time:

si ⁵	時	'time'
jit ⁸	日	'day'
ga ⁸	月	'month'
ni ⁵	年	'year'

Also:

lan ⁵	人	'person'
bin ⁷	面	'surface'

(ii) Pronouns, when not emphatic, i.e. after verbs, not in subject position:

gua ²	我	'I'
lu ²	你	'you'
i ¹	他	'he'
gun ²	我們	'we' (Excl)
lan ²	咱們	'we' (incl)
lin ²	你們	'you' (pl)
in ¹	他們	'they'

(iii) Marker of subordinate constructions:

ge ⁵	的	'of'
-----------------	---	------

(iv) Verbs:

lai ⁵	來	'come'
khui ³	去	'go'
kau ³	到	'arrive at'
si ²	死	'die'
tit ⁴	得	'obtain'
tioi ⁸	著	'obtain'

Double Enclitics:

Among the verbs, double enclitics may occur:

lo ⁸	lai ⁵	下來	'come down'	lo ⁸	khui ³	下去	'go down'
khi ²	lai ⁵	上來	'come up'	khi ²	khui ³	上去	'go up'
ka ³	lai ⁵	過來	'come over'	ka ³	khui ³	過去	'go over'
tshut ⁴	lai ⁵	出來	'come out'	tshut ⁴	khui ³	出去	'go out'
tui ²	lai ⁵	回來	'come back'	tui ²	khui ³	回去	'go back'

Among the nouns, double enclitics are not so common but $\tilde{s}i^1 \tilde{s}i^1$ 先生 'teacher, Mr., sir' is often made enclitic when preceded by a proper name as in $i\tilde{u}^5 \tilde{s}i^1 \tilde{s}i^1$ 'Mr. Yang' — 陽先生 or $t\tilde{i}u^1 \tilde{s}i^1 \tilde{s}i^1$ 'Mr. Tech' — 鐵先生. When it is preceded by a modifier, however, $\tilde{s}i^1 \tilde{s}i^1$ is never encliticised; thus $lau^7 \tilde{s}i^1 \tilde{s}i^1$ 'old teacher' has to be realized by the following pitch pattern — — — 老先生 and not by — ..

It is interesting to note that, whether a syllable is encliticised or not can bring about a difference in the meaning. Compare, for example, the following where (i) has the second syllable in isolation tone-form and (ii) has it in enclitic tone-form.

- | | | | | | |
|-----|------|-------------------|-------------------|-----|-----------------------|
| (1) | (i) | bo ⁵ | khui ³ | — — | 'did not go' |
| | (ii) | bo ⁵ | khui ³ | / | 'lost' |
| (2) | (i) | kia ^{~1} | si ² | — \ | 'fear death' |
| | (ii) | kia ^{~1} | si ² | — | 'frightened to death' |

Compounds

One of the arguments often put forward in support of setting up the word as a basic grammatical unit in Chinese is, that, contrary to popular belief, there exists in Chinese, a large number of compounds made up of syllables some of which are bound morphemes¹. While there are good grammatical reasons for considering compounds as a single unit, the word, it is not at all clear whether there is any phonetic justification for distinguishing two apparently identical sets of syllables in speech, one of which constitutes a compound and the other of which is merely a sequence.

Juncture has been suggested as a means of distinguishing compounds from separate words. Thus, it has been suggested that²

'forms of more than one syllable with compounding or close juncture between two syllables are usually single words; forms with space or open juncture between the syllables constitute separate words'.

Unfortunately, at the present stage of our investigation, it is not at all easy to ascertain just what are the phonetic correlates of juncture, and unless more evidence comes to light, juncture may turn out to be a phenomenon rather like Bloch and Trager's four degrees of stress which is passable in a taxonomic phonemic analysis but hardly necessary within the framework of a generative phonology.

1 Kennedy, (1951)

2 Bodman, (1955) 273

Two other suggestions seem more workable¹; the first is that in compounds of three syllables, the middle syllable is shorter than the other two, whereas in a non-compound sequence, all three syllables are of the same length; the second is that in compounds, the initial consonant is pronounced with the same degree of stress as in a sequence of one-syllable words, but the initial consonants of the following syllables are pronounced with less force.

Loan Words²

Loan words from polysyllabic languages would fit in very well if the word was set up as a basic phonological unit, but of course, loan words alone are no justification for setting up the word as they could be treated as coexistent phonemic systems, if necessary.

The following section on loan words is not meant to be a complete or authoritative one, but is merely meant to suggest some interesting phenomena found when loans are incorporated into Engchun Hokkien.

The whole question of loans into Malayan Engchun Hokkien is a complex one. First, there is the question of the source of the loan. The most important source languages are English and Malay, but Malayan English has yet to be the object of serious linguistic investigation³ and what is here referred to as Malay has within itself various dialects so that the phonetic shape of the loan would depend on the dialect of Malay it was borrowed from. For instance, what is represented by a final a in the orthography, like mata, gila, jaga, is pronounced [ə] in some dialects and [a] in others. It

1 loc. cit.

2 I am greatly indebted to G. B. Downer for many helpful comments which I have incorporated into this version.

3 cf. Saunders (1963) 177-187.

is evident that the variety of Hokkien studied in this thesis borrows its Malay loans from the dialect which has final [a] rather than [ə].

Then there is the question of the method of borrowing. There are cases of indirect borrowing, such as English stamp being borrowed into Hokkien via Malay setem and that of borrowing by character, such as that of English 'sofa' being borrowed into Hokkien via the characters 沙發 which were assigned to the loan when it was borrowed into a Shanghai dialect.

Besides, in a multilingual community, the phonetic shape of the loan-word would depend on whether the speaker had any knowledge of the source language. In the present linguistic situation in Malaya, this is also a question of the age of the speaker, as the younger Chinese immigrants are more likely to have a knowledge of English and Malay than the older immigrants. Thus, for example, while my informant who has no knowledge of English uses [bat] for bus, [tai ia] for tyre, [si ku tə] for scooter, a Hokkien speaker with a knowledge of English tends to use [bas] [taia] and [skutə] for these loans.

The term 'Malayan Hokkien' is used rather than 'Malayan Engchun Hokkien' because there seems to be a common core of words borrowed into all varieties of Hokkien and other Chinese dialects such as Cantonese. For instance, the Malay word kampung 'village' is borrowed into Hokkien with various types of pronunciations, such as [kam kɔŋ] [kim kɔŋ]. There is even evidence enough to indicate that this common core of words is borrowed into other languages spoken in Malaya, such as Tamil. A comparison with a study made on Malay loan words in Tamil¹ showed that more than half the words borrowed into Hokkien were borrowed into Tamil as well.

1 cf. Subbiah (1968 - forthcoming)

Most of the loans discussed in the following section are relatively recent loans and this, coupled with the fact that the informant was a monolingual, explains why the loans are recast into a form which does not necessitate the setting up of a secondary system¹. There is therefore, strictly speaking, no phonetic evidence to show that the loans are loans, but only the evidence that the native speaker of Hokkien regards these as 'foreign' and difficult to represent by means of characters.

The Phonological Structure of Malay Loan Words

When a Malay word is borrowed into Malayan Hokkien, its phonological structure is modified in the following way:

(1) Syllable Structure:

When a polysyllabic Malay word is borrowed into Malayan Hokkien, each syllable of the word is given a distinctive and contrastive pitch value. The structure of polysyllabic nouns is fairly rigid in the sense that the different syllables in the word are not capable of forming compounds with other words. In this respect, these polysyllabic loans may be said to resemble tightly-structured compounds. As the syllables in such a polysyllabic word never occur in isolation, it is not easy to determine whether the pitch values heard are the realization of tones in isolation or tones in connected speech. It seems reasonable, however, to assert that such polysyllabic words, once borrowed into the language, generally fit into its overall structure. Consequently, they are best considered as realizations of tones in connected speech. Moreover, when these polysyllabic words occur

¹ cf. Henderson (1951) 131 -132.

in connected speech, they conform to the regular rules of tone-sandhi.

Consider the following examples where the 'loan-word' (the first two syllables in each example) and the native syllable are realized like any ordinary phrase in the language:

a	tap	+	tshu	→	a	tap	tshu	'a tap house'
7	√		┘		7	√	┘	
ma	ta	+	kia	→	ma	ta	kia	'junior police- man'
1	1		√		1	┘	√	
sa	te	+	thua	→	sa	te	thua	'satay stall'
7	7		7		7	7	7	
jiam	bu	+	tshiu	→	jiam	bu	tshiu	'jambu tree'
7	┘		┘		7	┘	┘	

The structure of polysyllabic verbs is much looser. Many of the syllables in the polysyllabic verb may be used in isolation. For example:

- (i) bit tsa la could be abbreviated to bit. In fact, when the word is repeated in conversation, it is only the abbreviated bit which is repeated.
- (ii) Reduplication: it is the individual syllable which is repeated and not the whole word, e.g.
- ga lo → ga ga lo lo and not galo galo 'to quarrel noisily and continually'
- pa kat → pa pa kat kat and not paket paket 'to conspire'

It is interesting to note that a reduplicated word in Malay may be borrowed merely as an unreduplicated word, even when the unreduplicated word in Malay means something completely different. The word 'mata' in Malay means 'eye', whereas 'mata-mata' means 'policeman'. When the latter word

is borrowed into Malayan Hokkien, only the form 'mata' is used. Ambiguity does not arise, however, because the word 'mata' meaning 'eye' is not borrowed into Malayan Hokkien.

(2) Consonants:

(i) Final:

- (a) The only consonants which may occur in final position in a Malay^{an} Hokkien syllable are:

p t k ʔ
m n ŋ

In Malay, however, a word may end in other consonants besides the ones above. Consequently, when such words are borrowed into Malayan Hokkien, the final consonants not found in Malayan Hokkien are modified as follows:

-l	→	-t	as in akal	→	a kat
-r	→	-t	as in pasar	→	pa sat
-h	→	-ɸ	as in salah	→	sa la

(ii) Initial:

- (a) In Malayan Hokkien, there is a 3-point contrast between non-nasal stops in initial position:

Voiced	Voiceless Aspirated	Voiceless Unaspirated
b	ph	p
d	th	t
g	kh	k

In Malay, however, there is only a 2-point contrast:

Voiced	Voiceless
b	p
d	t
g	k

Thus, when one of these stops is borrowed into Malayan Hokkien, it may be used as one of three possibilities, a voiced stop, a voiceless aspirated stop and a voiceless unaspirated stop. Thus:

g	→	g	as in gila	→	gi la
g	→	k	as in gantaŋ	→	kan taŋ
t	→	t	as in tɔŋkat	→	tɔŋ kat
t	→	l/d	as in tumpaŋ	→	lɔŋ paŋ
b	→	b	as in bodoh	→	bo lo
d	→	th	as in diam diam	→	thiam thiam

- (b) In Malayan Hokkien, [l] and [d] are extrinsic allophones of the same phoneme. In Malay, however, [l] and [d] are separate phonemes. Thus, both [l] and [d] in Malay are borrowed into Malayan Hokkien as [l].

e.g.	duit	→	lui
	loŋkaŋ	→	loŋ kau

- (c) In Malay, [r] is phonemically distinct from [l]. In Malayan Hokkien, however, [r] does not occur and hence [l] is used when a Malay word containing the r- phoneme is borrowed into the language.

e.g.	baru	→	ba lu
	roti	→	lo thi

- (d) In Malayan Hokkien, [j] in initial position is followed only by [i]. In Malay, this is not so but may be followed by many vowels, e.g. [a] [u] [i] [o]. Consequently, when a word with initial [j] is borrowed into Malayan Hokkien, it conforms to the syllable structure of Malayan Hokkien by having an [i] after [j].

	jambu	→	jiam bu
e.g.	jagoŋ	→	jia ɛɔŋ
	jamban	→	jiam gan

(3) Vowels:

In Malayan Hokkien, [ɔ] and [o] are distinctive only when they occur in open syllables. Before a nasal final, only [ɔ] is used. In Malay, however, only [o] is used before a nasal final. Thus when a Malay word containing an [o] before a nasal final is borrowed into Malayan Hokkien, it is realized as an [ɔ]. Thus:

koson	→	ko ɔŋ
sombon	→	ɔŋ bɔŋ

The Phonological Structure of English Loan Words

When an English word is borrowed into Malayan Hokkien, the following modifications are made to its phonological structure:

(1) Syllable structure:

Consonant clusters:

There are no consonant clusters in Malayan Hokkien. Thus, when an English word with a consonant cluster is borrowed into Malayan Hokkien, it is split up into several syllables. Thus:

poustkad	→	po səkət
klʌb	→	khu lək pɔ
sku:tə	→	si ku tə

Vowel Clusters:

The only vowels which may occur in a cluster of 3 in Malayan Hokkien are: [iau] and [uai]. In English, however, many vowel clusters are possible. Consequently, when an English word with a vowel cluster is borrowed into Malayan Hokkien, it is split up into various syllables¹. Thus:

taia → tai ia

(2) Consonants:

English	M.E.H.	As in	
-ʃ-	s-	kəmiʃən	kam sim
-v	-p	keiv	kep
-f-	p	kɔfi	kopi
-r-	l-	lɔri	lo li

(3) Vowels:

-ɔ-	-ɔ- before a final stop	dɔktə	lɔk tə
-o-	-o- before zero final	mɔdən lɔri	mɔ tɛŋ lo li



¹ This splitting up into various syllables may well vary from one dialect to another, depending partly on how long the loan has been used, and partly on whether the Hokkien speakers speak any other language. In a Taiwanese dialect of Min, for example, the example below [taia] is actually realized as one syllable rather than as two separate syllables (personal communication with R. Cheng).

Loans from Amoy Hokkien

These loans, like the Malay and English ones, exist side by side with native Engchun words, and it is not possible to predict when one form would be used instead of another. Unlike the English and Malay loans, however, these loans do not entail any phonetic modifications largely because the phonological structure of Amoy is so similar to that of Engchun. These loans, however, are recognized by the informant as being 'non-Engchun' and co-exist with native Engchun words. They are as follows:

(1) Amoy [eŋ] where Engchun has [uĩ]. Thus:

先 sen¹ ~ sui¹
 千 tsher¹ ~ tshui¹
 間 keŋ¹ ~ kui¹
 前 tseh⁵ ~ tsui⁵
 平 peŋ⁵ ~ pui⁵

(ii) Amoy [əŋ] where Engchun has [uĩ]. Thus:

回 təŋ² ~ tui²

(iii) Amoy [uan] where Engchun has [uĩ]. Thus:

慣 kuan³ ~ kui³

(iv) Amoy [ã] where Engchun has [uã]. Thus:

那裏 ta² lo⁸ ~ tua² lo⁸

(v) Amoy [ien] where Engchun has [ĩ]. Thus:

先生 sien sĩ ~ sin sĩ or sĩ sĩ

(vi) Amoy [ia²] where Engchun has [ua²/uai²]

這些 tsia⁴ ~ tsua⁴ / tsuai⁴
 那些 hia⁴ ~ hua⁴ / huai⁴

(vii) Amoy [e] where Engchun has [ue]¹.

會 e⁷ ~ ue⁷
 地 te⁷ ~ tue⁷

Finally, there are certain forms which are extremely difficult to trace to any particular variety of Hokkien dialect in China but which have come to be used rather widely in Malayan Hokkien (in so far as this is definable). An important form which would seem to upset the phonological system set up is the final [-iaŋ]¹ as in:

[siaŋ⁵] 'the same'
 [siaŋ⁵] 'the most'
 [tiaŋ⁵] 'who'
 [tšiaŋ⁵] 'to have a shower'

It is interesting to note that certain lexical items are also used in Malayan Hokkien which are not used in Chinese Hokkien². Unlike the phonological loans, however, these lexical loans do not coexist with the native words, but tend to supplant them. The following are some examples:

1 Of these forms with final [-iaŋ], Bodman includes the first in his vocabulary of Malayan Amoy Hokkien, and the last in a slightly different form as [tsaŋ].

2 More accurately, in Engchun Hokkien. Both [po³ tiam³] and [hit⁴ si⁵] are used in a Taiwanese dialect of Min - (personal conversation with R. Cheng).

	<u>Engchun</u>	<u>Malayan</u>
'cloth shop'	tshai ⁷ pue ⁷ tiam ³	pɔ ³ tiam ³
'house'	sam ¹ han ⁵	paŋ ¹ lɔŋ ²
'that time'	hit ⁴ tsun ⁷	hit ⁴ tiap ⁸ si ⁵

It is also interesting that the lexical loans from Amoy do not supplant the native words in quite the same way as the Malayan loans do. Thus the following forms from Amoy and Engchun co-exist:

	<u>Engchun</u>	<u>Amoy</u>
'child'	kin ² kia ²	sue ³ kia ²
'meat'	hek ⁸	baɪ ⁴
'say'	sɔɪ ⁴	kɔŋ ²
'passive marker'	hɔ ⁷	khɪt ⁴

THE TONAL UNIT

The Phonological Phrase:

Above the level of the syllable and the word, the next level which has to be considered in a phonological study of Hokkien is that of the phrase. The term 'phrase' as used here refers to a phonological phrase whose relation to the grammatical phrase is touched upon in this thesis, but no attempt is made at a full-scale study of the correlation between these two types of phrases.

Phrase structure is realized phonologically by tonality, the distribution of the sentence into tonal groups; one phrase is realized as one tonal group. In an unmarked phrase, i.e. one which is not emphatic and not reduced, each word is realized by its sandhi tone form except the last word which is realized by its isolation tone form. These isolation and sandhi tone forms

can be represented in tabular form as follows:

TABLE V

ISOLATION AND SANDHI TONE FORMS

Tone Classes	Isolation	Sandhi
1	↑	↑
2	√	↑
3	┘	√
4	√	√
5	↗	┘
7	┘	┘
8	↗	┘
	┘	┘
	p, t, k	
	ʔ	

No one-to-one correspondence between isolation and sandhi forms:

It should be pointed out that there does not exist a one-to-one correspondence between the tone values in their isolation form and the tone values in their sandhi form. We make the following implications:

1. Two tone-classes may have different values for their isolation form but the same value for their sandhi form, e.g. tones 5 and 7 are realized in isolation as a rising and a low level pitch respectively, but they are both realized in sandhi as a low level pitch. This no doubt creates ambiguity as in the following pairs:

kau ⁵ phə ⁵	— /	'monkey's skin'
kau ⁷ phə ⁵	— /	'thick skin'
bo ⁵ sui ²	— \	'not beautiful'
bo ⁷ sui ²	— \	'the hat is beautiful'

Tone 8 is also realized in sandhi as a low level pitch, but as it ends in a stop, it does not create ambiguity with tone 3 and 7; similarly tone 4 is realized in sandhi as a falling pitch which is identical with the falling pitch of tone 3 in sandhi, but again there is no ambiguity as tone 4 ends in a stop whereas tone 3 does not¹.

2. Two tone-classes may have the same value for their isolation form but different values for their sandhi form, e.g. tones 3 and 7 are both realized, in isolation, as a low level pitch but in sandhi, tone 3 is realized as a falling pitch whereas tone 7 is realized as a low level pitch. Thus, for example, si³ 'four' and si⁷ 'yes, is' are both realized thus in isolation: | so that ambiguity arises in such cases as the following:

i¹ koŋ² si³ — / — he said 'four'

i¹ koŋ² si⁷ — / — he said 'yes, it was'

but not in cases as:

si³ tsap⁸ — / — 'forty'

si⁷ tsap⁸ — / — 'it is ten'

3. Many words used in ordinary conversation are never used in isolation forms and hence, strictly speaking, have no isolation tone value as such. Here are three examples:

1 In a Taiwanese dialect of Hokkien, however, tone 4 is realized in sandhi form without the stop final, so that ambiguity arises between to⁴ kha¹ 'table-leg' and to³ kha¹ 'left leg' (Personal communication with R. Cheng)

- (i) [tsun] occurs only with the two words [tsit⁴] 'this' and [hit⁴] 'that' to mean 'now' and 'then' respectively. In both cases, it is realized as a low level pitch.
- (ii) [tak] 'every' cannot occur in isolation but when combined with other words such as [ni⁵] as in [tak ni⁵] 'every year' or [ge⁵] as in [tak ge⁵] 'every one', it is always realized as a low level pitch.
- (iii) [kaŋ] and [hɔ], object markers, never occur in isolation form but are always realized as low level pitch:

i ¹ kaŋ lu ² kɔŋ ²	'he said to you'
i ¹ kaŋ tiam ³ thau ⁵ sia ¹	'he borrowed from the shop'
i ¹ hɔ sin ¹ si ¹ pha ⁴	'he let the teacher beat him'
gua ² hɔ lu ² tshia ²	'I let you invite me'

4. The isolation and sandhi tone values of the same tone class may be identical, such as that of Tones 1, 4 and 7.

It should be pointed out that in phonological/phonetic studies of Chinese, syllable structure and tone-sandhi phenomena¹ are among the most thoroughly handled aspects of the phonology. Yet the tone-sandhi

¹ For some treatments of tone-sandhi in some Chinese dialects, other than Hokkien, cf. Chao (1947: 25-26); Lü (1947: 235-264); Chao (1948: 26); Chang, N. (1958: 62-69). For specific treatments of tone sandhi in Hokkien, cf. Douglas (1873:xiv-xv), Tung (1959: 740-741), Lo (1930: 24, 26-28) Chiu (1930: 270-276), Bodman (1955) 84-86, 37-38.

- (2) u⁷ tsit⁸ ge⁵ hiu¹ e⁷ sien¹ si¹ la⁶ sio² o¹⁸ kau³ uan⁵ la⁶
 have one (cl.) village-down teacher (part) primary school teacher (part).

There was a teacher from down the village, a primary school teacher . . .

- (3) ia⁷ gun² khu³ khu³ pe⁷ ku² o⁶
 (conn) we (aux.) see quite long (part.)

And we went to see it, for a quite a long time . . .

- (4) kue¹ lo⁶ ai⁴ lo⁶ ue⁷ ka³ tsin¹ sui² o⁶
 chicken (part.) duck (part.) draw until very beautiful (part.)

The chickens and ducks were drawn very beautifully.

- (5) ji⁷ khu³ tai⁴ m⁵ kau² e⁶ tai⁴ lien⁵ tai⁴ m⁵ kau² e⁶
 word (aux.) stick door outside (part.) stick bill stick door outside (part.)

They would stick words and bills outside the door.

- (6) i¹ ko² jin⁷ tit⁶ jin⁷ tit⁶
 he say recognise recognise

He said he could recognise me.

- (7) te² bin⁷ hui⁴ ge⁵ ho¹ tshia¹ ti⁵ pi⁵ ni⁶ khu³ tsho³ hue¹ ho⁵ la⁶
 top side those (cl.) car park (part.) go make flower garden (part.)

As for the car park on top, it was made into a flower garden.

- (8) gua² bak⁸ tsiu¹ to³ ue⁷ kim¹ le⁶
 my eye can open (part.)

Oh! I can open my eyes after all!

Phonological and grammatical phrases:

The relation between phonological phrase boundaries and grammatical phrases may be dealt with under the following headings:

1. Subject-Predicate separated by a phrase boundary:

- (i) si⁷ te³ tsh³ tso⁷ thi¹ tue⁷
 God made heaven and earth
- (ii) tsek⁴ ge⁵ si⁷ ts⁵ pai³
 this one is 'ts⁵ pai'
- (iii) u⁷ lan⁵ sia² tsit⁸ tiu¹ phue¹
 someone wrote a (cl.) letter
2. The marker of subordinating constructions ge marks the subordinated phrase from the main phrase:¹
- (i) tak⁸ ni⁵ ge⁵ tsuei⁴ ki⁵ ge⁵ tai⁷ tsi⁷
 every year's festival 's matter ('concerning the annual festivals)
- (ii) tsui² e⁵ ti¹ kan¹
 Water's midst (the midst of the waters)
- (iii) t⁵ sua¹ ge⁵ lan⁵
 China's people

¹ [e] is sometimes used instead of [ge], see sentence (ii).

3. Direct speech is preceded by the word kɔŋ 'said' being realized by its isolation tone-form while indirect speech is preceded by the same word being realized by its sandhi tone-form.

Direct speech:

(i) si⁷ te³ kɔŋ² tioi⁸ u⁷ kŋ¹
 — — — — —
 God said 'Let there be light'

(ii) i¹ kaŋ in¹ kɔŋ¹ kɔŋ² kɔŋ¹ a⁶
 — — — — —
 He said to his grandfather: "Grandpa, . . ."

Indirect Speech:

(i) sin¹ si¹ kɔŋ² tse² thak⁸ m⁷ tioi⁸
 — — — — —
 The teacher said that this was read wrongly

(ii) gua² kɔŋ² si⁷ gun² kɔŋ¹ kaŋ⁷ gua² kɔŋ² e
 — — — — —
 I said that my grandfather told me so.

4. In cases of enumeration, the enumerated items are separated by phrase boundaries:

(i) tseŋ¹ si¹ khun¹ thaŋ⁵ ia² siu⁷ kɔk⁴ tsiŋ⁷ ki⁷ lui⁷
 — — — — —
 animals, insects, wild beasts, every one of its kind

(ii) ta¹ pɔ¹ tsa¹ bɔ² tua⁷ laŋ⁵ sue³ kia² loŋ² tsau² ka³ hau² liau²
 — — — — —
 male, female, grown-ups, children, all ran away

5. Adverbs of time are generally marked off as a separate phrase by a phrase boundary from the rest of the sentence:

(i) am³ mī⁵ to⁷ khu³

He goes back tonight

(ii) hien⁷ si⁵ tō³ tshia² i¹ seŋ¹

He is consulting a doctor now.

(iii) ko⁴ bo⁵ lua⁷ ku² tŋ⁵ sūa¹ ko⁴ sia² tsit⁸ tiū¹ phue¹ lai⁵

Not long afterwards, (somebody in) China wrote him another letter.

6. Nouns in apposition are marked off as separate phrases from each other by phrase boundaries:

(i) lan² tsa¹ bō² kīa² tio⁸ u⁷ ha³ pe⁷ bu²

we, daughters, must be filial to our parents.

(ii) in¹ kia² tu⁷ tsit⁴ peŋ⁵ ma² lai⁵ a¹

his son was over here, in Malaya.

(iii) lan² tŋ⁵ sūa¹ laŋ⁵ u⁷ tsin¹ tsue⁷ hōŋ¹ si⁸ k⁸

We, Chinese people, have many customs.

Emphatic phrases:

In an emphatic phrase, the word or words receiving special emphasis may be realized by its (their) isolation tone-form(s). In such cases, the words realized by their isolation tone-forms need not mark the phrase boundary. Consider the following examples where the phrase boundaries are all marked by the enclitic [a] and the words realized by isolation tone-forms mark not phrase-boundaries but emphasis.

Hui⁷ sien¹ ho⁷ lu² tsia⁸ sim² mi⁴ a⁶ 'What did H.S. give you to eat?'

- | | | |
|-----|------------------|--|
| (1) | <u>— — — — —</u> | Unmarked |
| (2) | <u>— — — — —</u> | Emphasis on [lu ²] 'you' |
| (3) | <u>— — — — —</u> | Emph. on [tsia ⁸] 'eat' |
| (4) | <u>— — — — —</u> | Emph. on [lu ²] and [tsia ⁸] |

Such emphasis is used here to mean 'information focus'. It is distinct from prominence which is a phonetic phenomenon¹. It was stated above that emphasis may be marked by a word or words being realized by its (their) isolation tone-forms. Other ways of marking emphasis are:

- (1) The use of particles at the end of each information focus. Thus:

i¹ tsit⁸ ke¹ teŋ⁵ a⁶ ke³ si⁷ phok⁴ su⁷ a⁶ lək tɔa⁶
— — — — —
 he one family (part) all is professors (part) doctor (part)

His whole family consists of professors and doctors.

1 On 'information focus' cf. Halliday (1967) 199-211.

On 'prominence' cf. Jones (1962) 137-144.

- (2) Widening of pitch range especially in cases where the isolation tone form coincides with the sandhi tone-form. The word emphasized is realized by a higher level of pitch if its isolation tone-form is high, and by a lower level of pitch if its isolation tone-form is low. Note the raising in pitch of [sa¹] and the lowering in pitch of [e] in the following sentences:

- (a) in¹ lau⁷ pe⁷ pue⁴ tsap⁸ sa¹ in¹ lau⁷ bu² pue⁴ tsap⁸ it⁴
 his father eighty-three his mother eighty-one

His father was eighty-three and his mother eighty-one.

- (b) e⁷ tue² khu³ khu¹ th⁵ ham⁷
 bottom go open pit

They dug a pit under-neath.

- (3) Duration by which is meant a lengthening in vowel length. Consider the lengthening of [ue] and [sui] in the following sentences[

- o:we⁷ gua² khu³ m⁷ i¹
 can I (aux.) ask him

Yes, he could. I asked him . . .

- sin ge⁵ phun³ tsui² ti⁵ tsin¹ tsia³ sui:ya⁶
 new (part.) sprinkle waterpond very beautiful (part.)

The new fountain was very beautiful.

It should be noted that more than one of these ways may be used at the same time over the same phrase to mark emphasis.

Finally, the relation between pauses and the realization of isolation tone-forms to mark phrases is an interesting one. In ideal conditions, they both coincide. In cases of hesitation and correction, however, it is interesting to note that the realization of the tone-forms can still be taken as a marker of the phrase. Consider the following examples where the phrase boundary is marked by the words realized by isolation tone-forms and not by the pause (isolation tone-form is marked thus ¹ pauses thus *).

- (1) $ia^{\phi} lu^2 \quad hit^4 ka\eta^1 \quad khuu^3 sin^1 ka^1 pho^1 \quad khuu^3 thit^4 tho^{*5} ku^2 bo^5$
- | | | | | | | | | | | | | |
|-------------|--------|----------|------------|----------|-----------|--------|---------|----------|----------|------------|--------|--------|
| ia^{ϕ} | lu^2 | hit^4 | $ka\eta^1$ | $khuu^3$ | sin^1 | ka^1 | pho^1 | $khuu^3$ | $thit^4$ | tho^{*5} | ku^2 | bo^5 |
| — | — | — | — | — | — | — | — | — | — | — | — | — |
| and you | | that day | | go | Singapore | | | go | tour | | long | no |

And did you spend a long time touring when you went to Singapore that day?

- (2) $tshut^4 khuu^3 \quad khuu^{*3} kua^1 tiu^1 tan^1 lo\eta^5 \quad hit^4 tau^1$
- | | | | | | | | | |
|-----------|----------|-------------|---------|---------|----------|------------|---------|---------|
| $tshut^4$ | $khuu^3$ | $khuu^{*3}$ | kua^1 | tiu^1 | tan^1 | $lo\eta^5$ | hit^4 | tau^1 |
| — | — | — | — | — | — | — | — | — |
| out | go | (aux.) | stop | by | T. T. L. | | that | place |

I went out and stopped by at T. T. L.'s place.

- (3) $i^1 sa\eta^3 \quad gua^2 \quad kau^{*3} \quad tsiu^7 \quad tshia^1$
- | | | | | | |
|-------|------------|---------|------------|----------|-----------|
| i^1 | $sa\eta^3$ | gua^2 | kau^{*3} | $tsiu^7$ | $tshia^1$ |
| — | — | — | — | — | — |
| he | send me | | until | board | vehicle |

He saw me to the vehicle.

(4)	a ⁶	gun ²	khui ³	tsue ³	tin ⁷	khui ³	tsia ⁸	pŋ ⁷	la ⁶
	—	—	—	—	—	—	—	—	—
	(conn)	we go	together	(aux.)	eat	rice	(part.)		

And we went out together and had a meal.

THE INTONATION UNIT

Pitch phenomena at sentence level:

Above the level of the phrase, the next level to be dealt with is that of the sentence. Each sentence generally corresponds to a single unit of intonation. The term 'intonation' as used here refers to pitch phenomena which are structurally relevant only at sentence level and not in any lower level such as that of the phrase or the syllable. The role of intonation is 'expressive' in the sense that it may express differences in the moods or attitudes of the speaker.

There are two dangers to be avoided in studying the intonation of Chinese in general and Engchun Hokkien in particular. One is that of assuming that intonation is due to the sequence of word-tones and nothing else; the other is that of assuming that intonation in one language should have the same shape and the same specific function as that of intonation in another language. For instance, in English, 'rising' and 'falling' tunes may cover a considerable number of words in a sentence, but in certain Chinese dialects, it seems best to describe a rising and falling tune in terms of the perturbation of one syllable only, the final syllable. This would seem to contradict our statement above that intonation is structurally relevant only at sentence level, but a closer look at it shows that what is meant is that although a rising or falling tune may be realized only on one

particular syllable, it is true to say that intonation is structurally relevant at sentence level, for (a) the change in pitch in the particular syllable takes place only if the syllable is found in a sentence, and not, for instance, in a phrase or word, or in isolation, (b) normally only one of the intonation elements can occur with each sentence (though in some cases two or more intonation groups may be recognized within the sentence - this is of course one reason why sentence (grammatical) and intonation unit (phonological) need to be distinguished in theory. Further, what is signalled by intonational differences in one language may be signalled by some other device in another language. Thus the abundant use of grammatical particles associated with intonation (obviously grammatically in construction with the whole sentence in which they occur) in Engchun Hokkien signals differences between sentence-types which would be signalled by intonation alone in some other language¹.

Two types of intonation:

It is conceivable that certain features of intonation may be considered language-universals, while other features are language-specific. For example, it appears that when a person is angry, his speech would be louder than normal, and the pitch level of his utterance ~~louder than normal~~, and ~~the pitch level of his voice utterance~~ higher than normal, no matter what language he is speaking. If, however, he wishes to ask a question instead of making a statement, he may use certain intonations in one language and quite different ones in another language. In view of this difference and of the 'more-less' character of the first type of intonation as opposed to

¹ Kao (1946) 81-117.

the 'yes-no' character of the second, it seems best to keep these two types of intonation separate. We shall call the first 'paralinguistic' intonation¹ and the second 'linguistic intonation'. Both these types are dealt with in this study. No attempt, however, is made to suggest the extent to which the paralinguistic intonation may be considered universal as this is clearly outside the scope of the thesis.

Intonational Devices:

In Engchun Hokkien, intonation is indicated by the following devices:

1. General Raising or Lowering of Pitch Level:

It should be noted that this is not a study of intonation based on instrumental readings. Hence, distinctions in pitch which are recognized here are those recognized by ^{the} native speaker as being sufficient for explaining his intuitions about the language. 'Pitch' as used here applies to the general configuration of pitch over the whole sentence and not just the pitch level of certain syllables in the sentence. The unmarked form is designated 'mid'. So that a raised level of pitch is raised in relation to 'mid' and a lowered level is lowered in relation to 'mid'.

2. Widening or Narrowing of Pitch Range:

Three ranges of pitch are distinguishable. The unmarked form is designated 'medium' so that a widening of pitch range is widened in relation to 'medium' and a narrowing of pitch range is narrowed in relation to 'medium'.

3. Perturbation of the Final Syllable:

The pitch inflection of the final syllable provides the clue as to

1 Crystal (1966: 93-108).

whether a sentence is in the 'rising' or 'falling' tune. Both these terms are necessarily relative to the underlying 'tone', of the syllable in question. Very often the final syllable is a particle encliticised to the preceding syllable. Where these encliticised particles are present, they help to bring out the rising or falling in the pitch of the final syllable. Thus, if the pitch inflections of these particles is studied in relation to the same syllable, they provide a clue as to what is meant by 'rising' and 'falling' tunes:

A Rising Tune is realized in the following ways:-

(i) a level tone is realized by a higher level pitch as in:

↑	44	→	↑	55
↓	11	→	↓	22

(ii) a falling tone is realized by a falling pitch which does not fall quite so low, as in:

↘	51	→	↘	53
---	----	---	---	----

(iii) a rising tone is realized by a mid-level pitch or by a pitch which rises higher than normal:

↗	24	→	↑	44
↗	24	→	↗	25

A Falling Tune is realized in the following ways:-

(i) a level tone is realized by a lower level pitch as in:

↑	44	→	↑	33
↓	11	→	↓	-11 resulting in creaky voice

(ii) a falling tone is realized by a falling pitch falling to zero,
thus:

$$\searrow 51 \quad \longrightarrow \quad \searrow 510$$

(iii) a rising tone is realized by a low level tone or rise plus fall:

$$\nearrow 24 \quad \longrightarrow \quad \downarrow 22$$

$$\nearrow 24 \quad \longrightarrow \quad \nearrow 241$$

Examples are given in the next section (The Relation Between Extrinsic and Intrinsic Allophones) showing how all the three devices are used to give the final pitch contour of the whole sentence.

THE RELATION BETWEEN

EXTRINSIC AND

INTRINSIC ALLOPHONES

EFFECT OF COMBINATION BETWEEN INTONATION AND TONE:

The final pitch contour of a sentence in Hokkien is the result of the extrinsic allophones of intonation being superimposed on the extrinsic allophones of tone. The main patterns are given below with examples:

Raised Pitch Level:

1. Scornful, contemptuous or defiant attitude:

(i) m⁷ ai³ thak⁸ tsə⁷ tɔ³ tsia⁵ la⁶
 — — — — —
 — — — — —

Since I do not wish to study, I'll sit and eat!

(ii) hŋ¹ m⁷ si⁷ lan⁵
 — — — — —
 — — — — —

Not human!

(iii) he² lu² tsit⁴ khi² e⁵ lŋ⁵ kɔ²
 — — — — —
 — — — — —

Heh! You peasant!

2. Horror:

(i) gua² khɔ³ a⁶ lan² ge⁵ tsa¹ bɔ² kia² thau¹ si¹ kia²
 — — — — —
 — — — — —

Horrors! Our daughter has given birth secretly!

3. Surprise:

(i) hē¹ gua² sua² ho² le⁶
 — — — — —

Oh! I am well now!

4. Vexation, annoyance, anger:

(i) bə⁷ pat⁴ bə⁷ lu² tsiu⁷ pha² i¹
 — — — — —

He has hardly started and you are beating him!

(ii) hai a khua³ lu² tua² u⁷ en⁷
 — — — — —

You good for nothing!

5. Protest:

(i) tian⁵ səi⁴ ə⁶
 — — —

Who said so? (I never did such a thing!)

Lowered Pitch Level:

1. Regret:

(i) bo⁵ pan⁷ huat⁴ lə⁶
 — — — — —

There's nothing I can do about it!

2. Perfunctory greeting or statement:

(i) tsau⁵ tsau⁵ tua⁷ than³ ɔ⁶— — — — .

May we all make plenty of money (answer to similar greeting)

(ii) lu³ tɔ³ bɔ² tsiu⁷ ho²— — — — \You will soon be well (doctor's statement to patient assuring her
that she would soon be well)

3. Repetition:

(i) ke³ ua⁷ khu³ lɔ⁶— — — —

They have all been transferred away.

(compare pitch pattern of preceding: — — — —)(ii) pan⁷ kɔŋ¹ sek⁴ ge⁵ mŋ⁵ khau²— — — —

Outside the door of the office.

(compare pitch pattern of preceding: — — — —)

4. Dismissal of topic:

(i) ho² la⁶ ho² la⁶— — — —All right, all right. (not really all right, but said to
dismiss the topic).

5. Awe:

(1) hua hit⁴ si⁵ tsuan⁵ en² tshun¹ ioi⁴ khi² lai⁵
 — — — — — — — —

My! At that time, the whole of Engchun came alive (with that news)

Relation between pitch level and pitch range:

Where part of a sentence has raised pitch level and part has lowered pitch level, the pitch range of that sentence will be wide; where the whole of a sentence has raised or lowered pitch level, the pitch range of the sentence will be narrow.

Widened Pitch Range:

1. Where one part of a sentence contrasts with another:

(1) ho² ia⁷ u⁷ lan⁵ ko² phai² ia⁷ u⁷ lan⁵ ko² la⁶
 \ — — — \ \ — — — \ .

It has its advantages and it has its disadvantages too.

Narrowed Pitch Range:

1. Repetition:

(1) phen³ kim¹ boi⁴ siau¹ lu² ge⁵
 \ — \ — — .

(compare pitch pattern of preceding:

— — — — —)

(ii) tua² tsit⁸ tiau⁵ si⁷ tian⁵ thuei⁸ e⁶
 / — / — — —

which item was taken by which person.

(compare pitch pattern of preceding:

/ — / — — —)

2. Complaint:

(i) in¹ khuu³ thuei⁸ ka³ nη⁷ pal⁴ kui² khɔ¹ tsin¹ tsia³ tsue⁷ la⁶
 — \ — — \ / — — \ —

They have borrowed up till 200 odd dollars. What a lot!

3. Perfunctory greeting:

(i) tsau⁵ tsau⁵ tua⁷ than³ ɔ⁶
 — — — — .

May we all make plenty of money.

(A standard reply to a New Year greeting 'May you make much money')

(ii) tsau⁵ tsau⁵ khɔ¹ kien³
 — — — —

May we all be healthy.

(A standard reply to a New Year greeting 'May you be healthy!')

Rising Tune:

It is necessary to distinguish between falling (not falling to zero) and rising due to successive tonal additions. These often distinguish an incomplete sentence from a question.

1. Unfinished sentence:

(i) ia⁷ gun²

and we

(compare: we)

(ii) ia⁷ tsiu⁷ khuu³ tui³ tshin¹ laŋ⁵ peŋ⁷ iu²

and so, from his relations and friends, he . . .

(compare: from his relations and friends)

2. Question:

(i) ia⁷ gun²

and we?

(ii) phun³ tsui² ti⁵ e⁵ sek⁴ tsin¹ tsia³ sui²
 ~ / / - \ - \ ~

The colour of the fountain was beautiful?

Questions have the above shape of intonation when they have the same word order as the sentence. Such questions are not as common as those containing question words and/or specific question particles. Some examples of such questions are given below:

(i) bue⁷ sai² kɔŋ² phai² ue⁷ a⁶
 - / / / - /

You must not use unlucky words. (Do you understand?)

(ii) lan² tai⁷ tsi⁷ sim² mi⁴ tai⁷ tsi⁷ m¹ thaŋ¹ kɔŋ² liau² na⁷ u⁷ tio⁸ kɔŋ² ho² a⁶
 \ - - \ \ - - - - / \ - - - ~

If there is anything, you must not say 'liau' but must say 'ho'
 (Do you follow?)

Falling tune:

(i) gua² tui³ ji⁷ ho⁷ kau³ pue⁴ ho⁷ loŋ² tsɔŋ² khu³ tsit⁸ le² pai⁷ a⁶
 ~ \ - - \ \ - / \ - / - - .

I went for a week altogether, from the 2nd to the 8th.

(ii) gua² tsit⁴ tsun⁷ lai⁵ kan² tsek⁸ ge⁵ ko³ su⁷
 — — — — — — — —

Let me tell you a story now.

(iii) ko³ su⁷ e⁵ tue⁵ bak⁸ si⁷ m⁷ si⁷ lan⁵
 — — — — — — — —

The subject of the story is 'not human'.

Voice quality features:

1. Breathy:

(1) Confiding, secretive:

(i) sai⁴ tsin¹ gau⁵ thak⁸
 — — — —

Oh yes, he is a very good student.

(teacher giving report to student's parent about student)

2. Happiness, thrill:

(i) u⁷ li¹ lia² tsin¹ hua¹ hi² ɔ⁶
 — — — — — —

Yes. Delia was very happy.

(narrator reflecting part of the happiness of Delia)

(ii) tse⁷ kia⁵ he⁷ kia⁵ hua¹ hi² ka³ khiet⁸ khiet⁸ thiau³

— — — — —
— — — — —

She walked here, there and everywhere, jumping around with joy.

(iii) khan¹ gua² te³ si³ kue³ kia⁵

— — — — —
— — — — —

She led me by the hand, all over the place.

Husky Voice Quality:

1. Annoyance:

(i) be⁷ pat⁴ ba⁷ lu² tsiu⁷ pha⁴ i¹

— — — — —
— — — — —

He has scarcely started (learning to read) and you are beating him.

Increased Tempo:

1. Impatience:

(i) bo⁵ pan⁷ huat⁴ la⁶

— — — — —
— — — — —

There's nothing I can do about it.

2. Scolding:

(i) hai a khua³ lu² tua² u⁷ en⁷
 \ - \ \ / - -

You good-for-nothing!

3. Surprise:

(i) hē gua² sua² ho² le⁶ bak⁸ tsiu¹ to² e⁷ kim¹ le⁶
 - \ \ \ - - \ -

Oh! I am well now. I can open my eyes!

4. Dismissal of topic:

(i) hō gua² tō² bue⁷ ki³ tit⁶ u⁷ ia² u⁷ ia²
 - \ \ \ - - - -

Oh yes, of course, I quite forgot. It's true, it's true.

5. Happiness and thrill:

(i) li¹ lia² tsin¹ hua¹ hi² ɔ⁶
 - \ - - \ -

Delia was very happy.

Decreased tempo:

1. Regret:

(i) bo⁵ pan⁷ huat⁴ lo⁶
 \
 - - -

There's nothing I can do about it (unfortunately).

ASSIMILATIONS

The assimilation discussed below is of a synchronic nature. It is what Jones calls 'contextual assimilation'¹ and what Abercrombie calls 'juxtapositional assimilation', namely, 'changes in pronunciation which take place under certain circumstances at the ends and the beginnings of words (changes at word boundaries, that is to say) when these words occur in connected speech, or in compounds.'²

Although the whole question of 'register' in language has yet to be studied satisfactorily,³ we find it convenient in discussing assimilation to make use of the concept of 'speed of utterance' and 'degree of formality' of the utterance. These are not to be regarded as clearly defined or discrete in any sense. They merely provide a continuum which varies from a slow speed to a fast one and from a formal style to an informal one.

The types of assimilation found in Hokkien are as follows:

- 1) those involving movement of articulators
- 2) those involving velic action
- 3) those involving glottal action
- 4) vowel mutations
- 5) contractions

The following sections attempt to link the style of discourse with the type of assimilation. It is an attempt to account for assimilation when it does occur rather than to predict when assimilation should occur.

1 Jones (1956) 217-219.

2 Abercrombie (1967) 133.

3 Halliday, McIntosh & Stevens (1965) 90.

4 The first three categories are taken from Abercrombie (1967) 133 ff.

Mutation rules are written for the different types of assimilation, together with a specification of what are 'the circumstances at the ends and the beginnings of words'.

<u>Element</u>	<u>Context</u>	<u>Changes to</u>	
1. p.a. of stop final	$\left\{ \begin{array}{l} \text{stop} \\ - \\ \text{nasal} \end{array} \right.$	p.a. of following initial	zero
dental nasal final	$-\left[\begin{array}{l} \text{labial} \\ \text{velar} \end{array} \right] \left\{ \begin{array}{l} \text{stop} \\ \text{nasal} \end{array} \right.$	$\left[\begin{array}{l} \text{labial} \\ \text{velar} \end{array} \right]$ nasal final	
non-dental unaspirated stop initial	non-dental nasal final		zero
2. voiced oral initial + oral vowel	\tilde{V} _____ N _____	nasal initial + \tilde{V}	zero
3. voiceless final	identical p.a. vowel	voiced final voiced final	zero

The above table summarizes the first three types of assimilation, namely, those involving movement of articulators, those involving velic action, and those involving glottal action. The column 'changes' to' includes various speeds of utterance varying from a slow speed of utterance on the left to a fast speed of utterance on the right. Thus, for example, rule 1 means that the place of articulation of a stop final changes to the place of articulation of the following initial where the speed of utterance is slow and to zero where the speed of utterance is fast. The types of assimilation described above as 'vowel mutations' and 'contractions' are best dealt with separately under a different section.

Examples of Rule 1:

'Japan'	[jit pun]	→ [jip pun]	[ji pun]
'one essay'	[tsit phĩ bun]	→ [tsip phĩ bun]	[tsi phĩ bun]
'one fish'	[tsit bə hu]	→ [tsip bə hu]	[tsi bə hu]
'one night'	[tsit mĩ]	→ [tsip mĩ]	[tsi mĩ]
'one day'	[tsit kaŋ]	→ [tsek kaŋ]	[tsi kaŋ]
'go out'	[tshut khu]	→ [tshək khu]	[tshu khu]
'some other'	[pat ge]	→ [pak ge]	[pa ge]
'ten sheets'	[tsap tiũ]	→ [tsat tiũ]	[tsa tiũ]
'ten heavens'	[tsap thi]	→ [tsat thi]	[tsa thi]
'with people'	[kap laŋ]	→ [kap laŋ]	[ka laŋ]
'ten peices of clothing'	[tsap nĩa sã]	→ [tsat nĩa sã]	[tsa nĩa sã]
'ten days'	[tsap kaŋ]	→ [tsak kaŋ]	[tsa kaŋ]
'chase'	[tsip khu]	→ [tsik khu]	[tsi khu]
'with us'	[kap gun]	→ [kap gun]	[ka gun]
'every copy'	[tak pun]	→ [tak pun]	
'every document'	[tak phĩ bun]	→ [tak phĩ bun]	
'every fish'	[tak bə hu]	→ [tak bə hu]	
'every year'	[tak nĩ]	→ [tak nĩ]	
'stomach'	[pak tɔ]	→ [pat tɔ]	

'daughter-in-law'	[sin pu]	---> [sim pu]	[sim ũ]
'very showy'	[tsin phiu]	---> [tsim phiu]	
'his wife'	[in bɔ]	---> [im bɔ]	[im ɔ̃]
'cold noodles'	[tshin mĩ]	---> [tshim mĩ]	[tshim ĩ]
'Singapore'	[sin ka pho]	---> [siŋ ka pho]	[siŋ ă pho]
'very poor'	[tsin khiau]	---> [tsiŋ khiau]	
'new moon'	[sin gəʔ]	---> [siŋ geʔ]	[siŋ əʔ]
'golden platform'	[kim tai]	---> [kim tai]	
'blue sky'	[lam thĩ]	---> [lam thĩ]	
'spirit'	[sim ley]	---> [sim neŋ]	
'restrict'	[kim tsi]	---> [kim tsi]	
'black market'	[am tshi]	---> [am tshi]	
'blue colour'	[lam sek]	---> [lam sek]	
'gratitude'	[kam kek]	---> [kam kek]	
'newly opened'	[tshim khui]	---> [tshim khui]	
'fire crackers'	[paŋ phauʔ]	---> [paŋ phauʔ]	
'sort of fish'	[kaŋ pue]	---> [kaŋ pue]	
'red face'	[aŋ bin]	---> [aŋ bin]	
'human head'	[laŋ thau]	---> [laŋ thau]	
'length'	[tŋ tə]	---> [tŋ tə]	
'same road'	[saŋ lo]	---> [saŋ lo]	

Examples of Rule 2:

'father-in-law'	[tiũ laŋ]	→ [tiu naŋ]
'refund somebody'	[heŋ laŋ]	→ [heŋ naŋ]
'you people'	[lin laŋ]	→ [lin naŋ]
'like this'	[an ni]	→ [ai]
'originally'	[puŋ tsia]	→ [puŋ ɲia]
'return'	[tuĩ lai]	→ [tuĩ nai]
'March'	[sã gəɿ]	→ [sã ɲəɿ]
'third sister'	[sã bə]	→ [sã mɔ]

Examples of Rule 3:

'ten pages'	[tsap bin]	→ [tsab bin]	[tsa bin]
'ten names'	[tsap mia]	→ [tsab mia]	[tsa mia]
'ten boxes'	[tsap aɿ]	→ [tsab aɿ]	
'eleven'	[tsap it]	→ [tsab it]	
'tonight'	[kim mi]	→ [kimɿ]	

Vowel mutation

The feature of vowel mutation refers to that process in the dialect by which the *i* in the underlying phonological system is realized as [e] or [ɔ] depending to some extent on the vowel of the following syllable. The [e] in these forms is what one would expect before [k] as final [ik] does not occur in the language. Thus in the following examples the [e] is accounted for in terms of assimilation rather than that of the following vowel.:

[tsek ge], [tsek ku], [tsek keŋ], [tšek gəɿpua], [hek ge], [hek kaŋ], [hek khi], [jek khu].

The following examples, however, still need to be accounted for in terms of the following vowel:

[tsek tsun], [hek tsun], [hək ku], [tsek ku].

CONTRACTIONS

In fast, colloquial speech, what constitutes two syllables in the underlying, abstract system often coalesce to form a unit whose phonetic realizations is identical with that of a single syllable. Such units cannot be given the same status as that of the syllable because they do not belong to the same level. Each syllable is capable of two pitch manifestations, one called its 'isolation-tone value' (manifested at phrase boundaries and for purposes of emphasis) and the other its 'sandhi-tone value' (manifested elsewhere). The contracted units, however, are capable of only one pitch manifestation -- as they are found only where reduction in speech takes place, the choice between emphatic and non-emphatic has already been made and cannot be made again. It is for this reason that the pitch manifestations of such units are marked graphically rather than by tone marks. Besides, these contracted units may be made up of segmental features not found in the syllable, e.g. the contracted unit ai^1 from an^1ni^1 'thus, so'.

A number of these contracted units seem more established than others. For example, the contractions for the numerals (twenties) (thirties) and (forties) are so well established that they even have a character assigned to them and separate entries in the dictionary, thus taking their place fully with the other syllables of the language. These forms are:

┘ ┘ √ $ji^7 tsap^8 it^4$ → $jiap it^4$ ┘ √

┐ ┘ √ $sā^1 tsap^8 it^4$ → $sam it^4$ ┐ √

√ ┘ √ $si^3 tsap^8 it^4$ → $siap it^4$ √ √

It should be noted that these units are used only for the twenties, thirties and forties and not for twenty, thirty, forty which are never reduced but are always $ji^7 tsap^8$, $sa^1 tsap^8$, $si^3 tsap^8$. $/sam^1/$ is also the reading pronunciation for 'three' so that $/sam^1/in/sam^1 it^4/$ could be treated either as the reading pronunciation or as a contracted unit.

Some of the contracted units may be made up of the sum total of the segmental features of both syllables but with only a single tone unit. For example,

- i) $tshin^1 tshiu^7$ 7 7 \rightarrow $tshiu^7$ 7 'like, as'
- ii) $ho^7 i^1 tsia^8$ 7 1 7 \rightarrow $hoi tsia^8$ 7 7 'give him to eat'
- $ho^7 i^1$ 7 7 \rightarrow hoi 7 'give him'
- iii) $m^7 ai^3$ 1 1 \rightarrow mai 1 'don't want'
- $m^7 ai^3 tsia^8$ 1 3 7 \rightarrow $mai tsia^8$ 3 7 'does not want to eat'
- iv) $m^7 bien^2$ 1 2 \rightarrow $bien$ 2 'no need'
- $m^7 bien^2 kia^5$ 1 1 1 \rightarrow $bien kia^5$ 1 1 'no need to walk'
- v) $ka^7 i^1 tso^3$ 1 7 1 \rightarrow $kai tso^3$ 7 1 'do for him'

Some of the contracted units may be made up of the whole of the 1st syllable and part of the second syllable. Thus:

- i) $i^1 ko^2$ 7 2 \rightarrow io^2 1 'he said'
- ii) $ka^1 ki^7$ 7 7 \rightarrow kai 7 'self'

iii) m⁷ thaŋ¹ 丿 7 → baŋ or maŋ¹ 7 'do not'

Some of the contracted units may be made up of part of the first syllable and part of the second syllable. Thus:

- i) hɔ⁷ gua² khua⁷ 丿 1 丿 → hua khua³ 1 丿
 ii) tsit⁸ ge⁵ 丿 1 → tse 丿
 iii) tsit⁴ ge⁵ 丿 1 → tse 丿

Where nasal consonants are found either at the end of the first syllable and/or at the beginning of the second syllable, nasalized vowels replace nasal consonants.

- i) an¹ ni¹ 7 7 → ai 7
 ii) kaŋ⁷ gua² sia¹ 丿 1 7 → kã sia¹ 1 7
 iii) bin² a² tsai⁷ 1 丿 丿 → mia tsai⁷ 1 丿

Besides contracted units which share features from both syllables there are also units which we shall call reductions which have the features of only one of the syllables. Like the contracted units, these reductions operate on phrases as well as on compound words. With some compounds, either of the syllables may be used depending on whether the compound occupies the final position of a phrase or not. For example, in (i) below, where tsin¹ tsia³ is in phrase final position, only tsin may be used. In (ii), however, where tsin¹ tsia³ is not phrase-final, both tsin¹ and tsia³ may be used.

i) $tsin^1 \quad tsia^3 \quad \uparrow \downarrow \rightarrow tsin \quad \uparrow$ 'really'

ii) $tsin^1 \quad tsia^3 \quad ho^2 \quad \uparrow \downarrow \downarrow \rightarrow tsin \quad ho^2 \quad \uparrow \downarrow$ 'very (really) good'

$tsia \quad ho^2 \quad \uparrow \downarrow$ 'very (really) good'.

Where compounds are made up of two syllables one of which is bound and the other free, the reduced unit assumes the shape of the free syllable and is capable of two pitch manifestations depending on whether it is in phrase-final position or not. For example:

$sio^1 \quad san^5 \quad \uparrow \downarrow \rightarrow san \quad \downarrow$ 'same as'

$sio^1 \quad san^5 \quad kan^1 \quad \uparrow \downarrow \downarrow \rightarrow san \quad kan^1$ 'same day'

In the case of phrases, such reductions can assume the shape of only one of the syllables but may be capable of two pitch manifestations one in phrase-final position and one in non phrase-final position.

For example:

$sia^2 \quad mi^8 \quad \downarrow \downarrow \rightarrow sia \quad \downarrow$ in/ non-final 'what'

$\rightarrow sia \quad \downarrow$ in/ final 'what'

$tua^2 \quad lo^8 \quad \downarrow \downarrow \rightarrow tua \quad \downarrow$ in/ non-final 'where'

$tua \quad \downarrow$ in/ final 'where'.

Within Syllables:Nasalization in syllables of the type CVN:

In syllables of the type CVN, if C is voiced, the phonetic realization of C may be either a voiced nasal or its homorganic stop. Thus whether /bin/ is heard as [bin] or [min] is difficult to detect.

Syllabic Finals:

The phonetic realizations of the syllabic finals [m] and [ŋ] which we treat as /ə m/ and /ə n/ may be realized with or without the schwa vowel, depending on the place of articulation of the initial and final within the syllable. Thus, where there is a considerable distance between the place of articulation of the initial and that of the final consonant, the schwa vowel is heard, as in [pəŋ] [təŋ] [tʃəŋ] but not where the distance between the place of articulation of the initial and that of the final is negligible, as in [kəŋ] [kʰəŋ].

Status of h:

[ɸ] a bilabial fricative occurs with [uaŋ]. It is best to consider this as a special manifestation, an intrinsic allophone of /h/ due to the back rounded vowel in its immediate environment. Elsewhere, /h/ is realized phonetically as a devoiced vowel, thus /him⁵/ → [iim⁵].

SAMPLE TRANSCRIPTIONS

KEY TO THE TRANSCRIPTIONS

The following sample transcriptions are made from texts which were recorded on tape. The three texts selected represent to a certain extent different styles of speech and different speeds of utterance. Text A is an account of the Japanese occupation in Malaya based on a mimeograph written by the informant's wife. Text B is a semi-formal account of Chinese festivals composed by the informant without any reference to any written or oral source. Text C is an informal conversation between the informant and his wife.

The top line of each transcription is a broad phonetic transcription representing intrinsic allophones; the second line represents the pitch contours; the third line is a phonemic transcription representing the extrinsic allophones; the fourth line consists of Chinese characters which are not meant to be etymologically identical with the corresponding spoken Hokkien morpheme but are included to provide a clue to the types of constructions found in Hokkien; the fifth line is a word-for-word translation into English and the last line is an idiomatic English translation.

TEXT A

1. tsui tʃhit tʃhit sui pien i au

tsui⁷ tʃhit⁴ tʃhit⁴ sui⁷ pien³ i² au⁷

自 七 七 事 變 以 後

since seven seven thing change afterwards

After much change,

2. jip pun e kun huat tʃin tʃia ɕi iam ban tɿ

jip⁸ pun² ge⁵ kun¹ huat⁸ tsin¹ tsia³ khi³ iam⁷ ban⁷ tɿ⁷

日 本 的 軍 閥 (很) 氣 焰 萬 丈

Japan 's army very spirit on fire

The Japanese army, with a fiery spirit.

3. tek tshun tʃin tʃhio[?] e sim bo u sio khua then hio

tek⁴ tshun³ tsin³ tʃhio[?] ge⁵ sim¹ bo⁵ u⁷ sio² khua² then⁵ hio[?]

得 寸 進 尺 的 心 沒 有 (稍) (歇)

obtain inch advance foot of heart no have little bit stop rest

kept advancing forward and did not rest a little.

4. khia[?] tu ma lai a ge hua kiau

khia⁷ tu⁷ ma² lai⁵ a¹ ge⁵ hua⁵ kiau⁵

住 在 馬 來 亞 的 華 僑

live at Malaya of Chinese citizens.

The Chinese citizens living in Malaya.

5. pi kau u uan tai gan kɔŋ ge

／ ˋ ˋ ˋ ˋ ˋ ˋ ˋ ˋ

pi² kau³ u⁷ uan² tai⁷ gan² kɔŋ¹ ge⁵

比較有遠大眼光的

more have far big eye light of

those who have somewhat greater foresight,

6. bo t̃ide bo tui the sim tiau tã

ˋ ˋ ˋ ˋ ˋ ˋ ˋ ˋ

bo⁵ tsit⁸ ge⁵ bo⁵ tui⁷ the⁵ sim¹ tiau³ tã²

沒一個沒在提心吊胆

no one (cl.) no at raise heart hang liver

there was not one of them who was not in anxiety,

7. kiã de jip pun ue? lam t̃in

ˋ ˋ ˋ ˋ ˋ ˋ ˋ ˋ

kiã¹ liau² jit⁸ pun² ue⁷ lam⁵ tsin³

怕了日本會南進

fear (part.) Japan can south advance

fearing that the Japanese might advance southwards.

8. hi? si tsue? gun naŋ khia tui? t̃i hai gua

ˋ ˋ ˋ ˋ ˋ ˋ ˋ ˋ ˋ ˋ

hit⁴ si⁵ tsue⁴ gun² laŋ⁵ khia⁷ tui⁷ tsi² hai² gua⁷

那時候我們住在這裡海外

that time we live at here overseas

at that time, we were living here, overseas,

9. sim sit tsai si siau liam nan e tion kək

sim¹ sit⁸ tsai⁷ si⁷ siau³ liam⁷ lan² ge⁵ tion¹ kək⁴

心 實 在 是 思 念 我 們 的 中 國

heart really be think of our China

but our hearts were really in China.

10. tu iau tak jit ui tio² o² t² ge kan khə i gua

tu⁵ liau² tak⁸ jit⁸ ui⁷ tio⁸ o⁸ t⁵ ge⁵ kan¹ khə⁷ i² gua⁷

除 了 每 日 為 着 學 校 的 功 課 以 外

apart (part.) every day because of school's work other than

Apart from our concern with school work every day,

11. gun t²i bin tshu dat phun tsau kiu t²sin hue ge kan tso²

gun² tsit⁸ bin⁷ tshut⁴ lat⁸ phun¹ tsau² kiu⁷ tsin² hue⁷ ge⁵ kan¹ tso⁴

我 們 一 面 竭 力 奔 走 籌 賑 會 的 工 作

we one side exert strength benevolent society's work

on the one hand, we spent much of our energy in the work of benevolent societies,

12. t²i bien ka kin hun dien hak sen ai kək ge t²sen sin

tsit⁸ bien⁷ ka¹ kin² hun³ tien⁷ hak⁸ sen¹ ai³ kək⁴ ge⁵ t²sen¹ sin⁵

一 面 加 緊 訓 練 學 生 愛 國 的 精 神

one side add quick train students love country 's spirit

on the other hand, we quickly taught the students the spirit of patriotism,

13. kui la? nĩ nĩ dɔŋ si tʃhin iũ tʃi jit an ni tsue

／ — — — — — — — — — —

kui² la⁷ nĩ⁵ lai⁵ lɔŋ² si⁷ tʃhin¹ tʃhiu⁷ tsit⁸ jit⁸ an¹ ni¹ tsue⁷

(數) 年 來 都 是 好 像 一 日 那 樣 多

several year come all be like one day this kind many

several years passed by just like a single day.

14. khio ga bo sim le gien kiu tʃede lam tʃin i au

— — — — — — — — — —

khio⁴ a⁷ bo⁵ sim¹ lai⁵ gien¹ kiu³ tsit⁴ ge⁵ lam⁵ tsin³ i² au⁷

却 也 無 心 來 研 究 這 個 南 進 以 後

(conn.) no heart (aux.) study this (cl.) south advance afterwards

we were too busy to study the question of what might happen

15. so e hual seŋ ge bun tue

／ — — — — — — — — — —

so² ue⁷ hual⁴ seŋ¹ ge⁵ bun⁵ tue⁵

所 會 發 生 的 問 題

that which can happen of question

after the Japanese had advanced southwards.

TEXT B

1. a ǎ tŋ sũa laŋ a tsə kə nĩ e si tsuei a

— — — — —

ia⁷ lan² tŋ⁵ sũa¹ laŋ⁵ a⁶ tsit⁴ ge⁵ kə³ nĩ⁵ ge⁵ si⁵ tsuei⁴ a⁶

也 我們 中國 人 啊 這 個 過 年 的 時 候 阿
and we China people (part.) this (cl.) pass year's time (part.)

And we, Chinese people, at New Year time,

2. ta ǐe si thai kue la thai a² la

— — — — —

tak⁸ ge⁵ si⁷ thai⁵ kue¹ la⁶ thai⁵ a² la⁶

每 個 是 殺 雞 啦 殺 鴨 啦
every one be kill chicken (part.) kill duck (part.)

we all kill chickens and we all kill ducks.

3. bue tui xa la bue ba la

— — — — —

bue² tui¹ kha¹ la⁶ bue² ba² la⁶

買 豬 腳 啦 買 肉 啦
buy pig trotter (part.) buy meat (part.)

we buy pig's trotters and we buy meat,

4. ia e tsui ka tsit tə to² ai² dau diet t[hi³ t[hi³la

— — — — —

ia⁷ tio⁸ tsui² ka³ tsit⁸ tə³ to⁴ an¹ ni¹ lau⁵ jiet⁸ tshi⁴ tshi⁴ a⁶

也 必 煮 到 一 桌 這 樣 熱 () () 阿
and must cook till one (cl.) table this kind festive (very) (part.)

and we must cook a table full of food so that it is very festive.

5. ta? e lan nai tsia la

— — / —

tak⁸ ge⁵ lan⁵ lai⁵ tsia⁸ la⁶

每 個 人 來 吃 啦

every (cl.) person come eat (part.)

Everyone comes along to eat.

6. a dye tsia e si tsue? ai tɿ sũa lan u texak tsit haŋa

— — — — — — — — — —

a⁷ na⁷ tɿ³ tsia⁸ ge⁵ si⁵ tsue⁴ a⁶ tɿ⁵ sũa¹ la⁵ u⁷ tek⁴ khak⁴ tsit⁸ ha⁷ a⁶

也 若 在 吃 的 時 候 阿 中 國 人 有 得 確 一 項 阿

(conn.) if at eat of time (part.) China people have must one thing (part.)

When eating, the Chinese people must have one thing . . .

7. tio he tsha mĩ a tsha bi hun dai bin

— — — — — — — — — —

tio⁸ hek⁴ ge⁵ tsha² mĩ⁷ a⁵ si⁷ tsha² bi² hun² lai⁷ bin⁵

要 那 個 炒 麵 或 是 炒 米 粉 裏 面

must that (cl.) fry mee or be fry mee hoon inside

inside the fried mee and the fried mee hoon (types of noodles), they must

8. u paŋ tʃeŋ tua tʃhai a

— — — — — — — — — —

u⁷ paŋ³ tʃek⁴ ge⁵ tua⁷ tʃhai³ a⁶

有 放 這 個 大 菜 啊

have put this (cl.) big vegetable (part.)

put the 'big vegetable'

9. kui tiau tŋ tŋ pi tui kha xa tŋ ẽ i

— / — / — — \ / —

kui¹ tiau⁵ tŋ⁵ tŋ⁵ pi² tui¹ kha¹ kha⁴ tŋ⁵ an¹ ni¹

全條長長比豬腳更長這樣

whole (cl.) long long compare with pig trotter more long this kind

They must put in the whole long piece, longer than pigs' trotters

10. tʃit tiau tʃit tiau tʃham tə tsui ə

— — — / — — \ .

tsit⁸ tiau⁵ tsit⁸ tiau⁵ tʃham¹ tə³ tsui² ə⁶

一條一條 () 在煮阿

one (cl.) one (cl.) mix in midst of cook

and mix it with the rest of the food to cook.

11. hi gi kio tsueʔ tŋ mĩa tʃhai la

— \ — \ — — — .

hit⁴ khi² kio³ tsue³ tŋ⁵ mĩa⁷ tʃhai³ la⁶

那種叫着長命菜啦

that kind call as long life vegetable (part.)

that kind of vegetable is called 'long-life vegetable'.

12. kŋ tsiaʔ liau lan e tŋ mĩa

/ — \ / — — —

kŋ² tsia⁸ liau² lan⁵ ue⁷ tŋ⁵ mĩa⁷

說吃了人會長命

say eat finish people able long life

it is said that when eaten, it will give people long lives.

13. tsi ke teŋ e laŋ si tsek khuan e sip kuan

tsit⁸ ke¹ teŋ⁵ ge⁵ laŋ⁵ si⁷ tsit⁸ khuan² e⁵ sip⁸ kuan⁷

一 家 庭 的 人 是 一 種 的 習 慣
one family of people be one kind of custom

It is a kind of custom with the whole family.

14. a u e kə nĩ t^ye xa tə bue sŋkiã

a⁷ u⁷ ge⁵ kə³ nĩ⁵ tek⁴ khak⁴ tioi⁸ bue² sŋ³ kiã²

也 有 的 過 年 得 確 要 買 () ()
(conn.) have some pass year must buy a kind of leek

For some people, at New Year time, they must buy a kind of leek

15. ŋ kĩa ka tio ə sŋ a tŋiu si tŋin tsue e i sui la

kŋ² kĩa² ka³ tioi⁸ khw³ sŋ³ a⁶ tŋiu⁷ si⁷ tŋin¹ tsue⁷ ge⁵ i³ sui⁷ la⁶

說 子 到 要 去 算 阿 就 是 (很) 多 的 意 思 啦
say children until must (aux.) count (conn.) be very many of meaning (part.)

it is said that if children need to be counted, there must be very many of them indeed!

16. sə ta ŋe ʔe kiam tə bue sŋ kĩa ia tio bue he ge kan na

sə² i² tak⁸ ge⁵ ke¹ kiam² tɔ¹ tioi⁸ bue² sŋ³ kĩa² ia⁷ tioi⁸ bue² hit⁴ ge⁵ kam¹ la¹

所 以 每 個 多 少 都 要 買 () () 也 要 買 那 個 柑 啦
therefore every one more less all must buy leek

therefore every one must buy some leeks.

TEXT C

1. le tsi pai ge [~]sie [~]sua loŋŋ kun ka ku kaŋ a

lu² tsit⁴ pai² khu³ sin¹ sua¹ lɔŋ² tsɔŋ² khu³ ka³ kui² kaŋ¹ a⁶

你這次去新山一共去到幾日阿？

you this time go 'new mountain' altogether go till how many day (part).

How many days did you spend in Johore Bahru during your recent visit?

2. gua tui d^yi ho kau pue² ho non t^hon khuu t^hide pai ə

gua² tui³ ji⁷ ho⁷ kau³ pue⁴ ho⁷ loŋ² tsəŋ² khuu³ tsit⁸ le² pai³ a⁶

我從二日到八日一共去一禮拜阿

I from second day until eighth day altogether go one week (part.)

I stayed for a week altogether, from the second till the eighth.

3. pun ya d^yi pa² uŋ ku ka tu t^{ap} si ho t^ya t^{ui} nã la

pun² tsia⁵ si⁷ pha⁴ sn³ khay³ ka³ tu² tsap⁸ si³ ho⁷ tsia⁴ tui² lai⁵ la⁶

本來是打算去到()十四日才回來啦

originally be plan go till just ten four day then return (part.

Originally, I planned to stay till the fourteenth and only then return.

4. in wi tsap ɿɔ ho duu sǐ d^yi la

in¹ ui⁷ tsap⁸ g⁷ ho⁷ lum² si¹ jit⁸ la⁶

因為十五日你生日啦

because ten five day you born day (part.)

because the fifteenth is your birthday.

5. a ta? in wi t^ye? ke ɕi xan bwe? tu a so? i
 — — — — — — — — — —

a⁷ t¹ in¹ ui⁷ tsit⁴ ge⁵ si⁵ kan¹ bue⁷ tu² a⁶ so² i²

() () 因為 這個時間 不合阿所以

(conn.) because this (cl.) time cannot suit therefore

this time was not suitable, so

6. ɲwē x tsa? uĩ nǎi lə
 — — — — —

gua² kha² tsa² tui² lai⁵ la⁶

我 比較早 回來 啦

I more early come back (part.)

I have come back earlier (than originally planned).

7. ia de i kǎ kē sin a po kə the tho ɿ ku ɓo
 — — — — — — — — — —

ia⁷ lu² hit⁴ kan¹ khu³ sin¹ ka¹ pho¹ khu³ thit⁴ tho⁵ ku² bo⁵

也 你 那 天 去 新 加 坡 去 遊 玩 久 嗎?

and you that day go Singapore go enjoy yourself long no

and did you spend a long time in Singapore when you went that day?

8. kui ɕin a po ɕ kui nŋ pai thau tɕ pai si mǐ si xui
 — — — — — — — — — —

khu³ sin¹ ka¹ pho¹ si⁷ khu³ nŋ⁷ pai² thau⁵ tsit⁸ pai² si⁷ mǐ⁵ si⁵ khu³

去 新 加 坡 是 去 兩 次 頭 一 次 是 晚 上 去

go Singapore be go two times first time be night time go

I went to Singapore twice, the first time I went at night.

9. tshu¹ khu¹ xu¹ kua¹ tiū¹ tan¹ oŋ¹ he¹ tau¹

tshut⁴ khu³ khu³ kua¹ tiū¹ tan¹ loŋ⁵ hit⁴ tau¹

出 去 去 () 張 那 裏

out go (aux.) stop over Teh Tan Long that place

When I went out, I stopped over at Teh Tan Long's place

10. bo¹ xu¹ tshə¹ i¹ tət¹ ai¹ pu¹ i¹ m¹ k¹ iā¹

bo⁴ khu³ tshə⁷ i¹ thue⁸ tsuai⁴ pə⁷ ge⁵ mŋ⁷ kiā⁷

要 去 找 他 取 這些 背 的 東西

want go find him get these carry on back 's thing

I wanted to get from him those things for carrying on the back

11. tē¹ tan¹ nō¹ e¹ di¹ de¹ bue¹

tiū¹ tan¹ loŋ⁵ ue⁷ jin⁷ tit⁶ lu² bue⁷

張 會 認 得 你 嗎?

Teh Tan Long able recognise you not able

Could Teh Tan Long recognise you?

12. o : we¹ wa¹ khu¹ mŋ¹ i¹

ue⁷ gua² khu³ mŋ⁷ i¹

會 我 去 問 他

able I go ask him

He could. I went and asked him:

13. ʔæ tu tu ʔu tʃeɪ gei pa laŋ tu tə

— — \ — — — — / — .

a⁷ tu² tu² u⁷ tsit⁸ ge⁵ pat⁸ laŋ⁵ tu⁷ tə⁷

恰巧有一個別人在那裏

by chance have one (cl.) other person present

It so happened that there was one other person present.

14. ka kai ɕiao tsə t^ye ge t^yə̃ ma nai a i ge sui de ho i

— \ — — \ — — / — — / — — / — — \ —

ka⁷ i¹ kai³ ɕiau³ səi⁴ tsit⁴ ge⁵ tsuan⁵ ma² lai⁵ a⁶ ge⁵ sui⁵ te⁷ it⁴ ho² ge⁵

把他介紹說這個全馬來亞的詞第一好的

he introduce say this one whole Malaya of poetry first good

He introduced me to him, saying: 'His poetry is the best in the whole of Malaya'.

15. bo ko te di yɛ xaɪ ɲia i

— \ — — / — — / — —

bo⁵ koɪ⁴ te⁷ ji⁷ ge⁵ khaɪ⁴ ia⁵ i¹

沒有第二個比他更好的

no more second one more surpass him

there is not a second person to surpass him (in poetry).

16. i t^ye ke ten a k^hə zi p^hɔɪ sui ə lək tu dai e

— — — — \ — — — — \ — — — —

i¹ tsit⁸ ke¹ ten⁵ a⁶ ke³ si⁷ phək⁴ sui⁷ a⁶ lək⁸ tə² an¹ ni¹ ge⁵

他一家庭阿都是博士阿 這樣的

he one family (part.) all be professor (part.) doctor this kind

His whole family consists of professors and doctors.



Eden Grove

Wash. D. C.

APPENDIX

THE SEED - A. H. ORLED

APPENDIX ISYLLABLE TYPES

The following tables contain all the syllables found in Engchun Hokkien. The syllables include what etymologists call the 'reading pronunciation' as well as the 'colloquial pronunciation'. Their method of representation in the tables is as follows: reading pronunciations are represented by characters; colloquial pronunciations are represented by characters enclosed within brackets, where they can be adequately represented by a single character, and by brackets only where they cannot be adequately represented by a single character. Where a syllable may be represented by all three forms, the priority is: character, character enclosed within brackets, brackets. This is not to be taken as indicative of the priority given to the status of the forms but that such a priority in the presentation of the data is of maximum use for purposes of comparison with other Chinese dialects. The tables include a number of 'local characters', which are by no means standardised, so that a non-Hokkien speaker would find them unfamiliar. Where such characters are used, they are glossed as well.

The transcriptions used in the tables are narrow enough to include extrinsic allophones. Thus /bã/ is written as [mã], /lã/ as [nã], /gã/ as [ŋã], etc. The entering tones are not separated from the other tones, but are arranged as follows: in syllables of the CVN type, the entering tones, i.e. tone 4 and tone 8 are realized as the homorganic stop, so that /ban⁴/ is realized as [bat], /ban⁸/ as [bat], /tim⁴/ as [tip], /tim⁸/ as [tip] and so on. In syllables of the type CV., the entering tones are realized by

a glottal stop, so that /o⁴/ is realized as [oɿ], /o⁸/ as [oɿ] and so on.

Similar attempts have been made to present a completed syllabary of Amoy Hokkien. See, for example, Lo (1930) Tables II and III. We note, however, one striking difference between his approach and ours: while he is concerned only with 字音, the pronunciation of characters, we are concerned with what occurs in the stream of speech, hence, the importance of the empty brackets.

Initial \ Final							
	-oŋ ¹	-oŋ ²	-oŋ ³	-ɔk ⁴	-oŋ ⁵	-oŋ ⁷	-ɔk ⁸
1. p-	翁	往	甕	屋	王	旺	(甕)
2. p-	()	榜	謗	兆	房	磅	僕
3. ph-	磅	()	碰	博	泵	()	曝
4. b-	()	莽	()	()	亡	望	木
5. t-	東	儻	凍	篤	同	洞	獨
6. th-	湯	桶	痛	託	糖		讀
7. l-	(門)	朗	()	()	農	浪	祿
8. ts-	莊	總	壯	作	崇	藏	族
9. tsh-	窗		創	錯	叢		簇
10. s-	霜	爽	送	速	()	()	()
11. k-	光	廣	貢	各	狂	()	咯
12. ʔ-	空	孔	抗	酷	()	()	(析)
13. ʃ-		()			畧	戇	罵
14. ʎ-	風	訪	放	福	紅	奉	伏
15. j-							

- 1 pəŋ¹ rumour
 1 phəŋ¹ abundant
 2 phəŋ² to support with both hands
 5 phəŋ⁵ sound of stone thrown into water (local character)
 7 phəŋ⁷ sound of drums
 1 bəŋ¹ to strike
 3 bəŋ³ unseemly behaviour
 4 bəŋ⁴ inefficient, easy-going, careless
 3 ləŋ³ sound of things being moved
 4 ləŋ⁴ to wade in water
 5 səŋ⁵ very clumsy
 7 səŋ⁷ to walk very slowly
 8 sək⁸ latch, bolt
 7 kəŋ⁷ to recite incantations
 5 khəŋ⁵ to pack things up or check the number of things
 7 khəŋ⁷ sound of noisy children
 2 gəŋ² the barking of dogs

Initial \ Final		-ioŋ ¹	-ioŋ ²	-ioŋ ³	-ioŋ ⁴	-ioŋ ⁵	-ioŋ ⁷	-ioŋ ⁸
1. ø-		央	勇	映	約	陽	用	育
2. p-								
3. ph-								
4. b-								
5. t-		中	長	帳	竹	鍾	丈	逐
6. th-		衷	冢	暢	蓄	蟲		
7. l-		鐘	兩		掠	娘	亮	六
8. ts-		將	種	衆	祝	從	(狀)	
9. tsh-		充	搶	唱	雀	牆	匠	()
10. s-		箱	想	相	宿	詳	上	續
11. k-		恭	拱	供	腳	強	共	局
12. kh-		薑	恐	佻	卻			
13. ɣ-			仰		()		山中	玉
14. h-		兇	響	向	旭	雄		
15. j-			攘	醺		戎	讓	肉

tshioŋ⁸

to insert

khioŋ³

a personal name (local character)

giok⁴

cruel and tyrannical

gioŋ⁷

name of a mountain (local character)

Final Initial	-aŋ ¹	-aŋ ²	-aŋ ³	-ak ⁴	-aŋ ⁵	-aŋ ⁷	-ak ⁸
1. ɸ-	(翁)	翁	(瓊)	渥	(紅)		(瓊)
2. ɸ-	邦	紉邦	(放)	剝	(房)	蚌	(縛)
3. ph-	(蜂)	(紡)	()	璞	擇	(縫)	(晒)
4. b-	(濃)	(蚊)		(汙)	(芒)	(夢)	(墨)
5. t-	(冬)	(董)	(凍)	(觸)	(銅)	(動)	(毒)
6. th-	(窗)	(桶)	(痛)	()	(虫)		(讀)
7. l-		(朗)	()	()	(人)	(弄)	(六)
8. ts-	(棕)	(總)	(粽)	(齒足)	(穰)		()
9. tsh-	(葱)		()	()			(鑿)
10. s-	(雙)	()	(送)	(諷)	(同)		
11. k-	江	講	降	覺		(共)	(投)
12. kh-	(空)	()	()	石確			()
13. ɣ-							山嶽
14. h-	(烘)	(哄)	()	()	降	項	學
15. j-							

aj ¹	husband
phaŋ ³	fat, chubby
thaŋ ⁴	to move the balls of an abacus
laŋ ⁵	to leave a space
laŋ ⁴	to drop
tsak ⁶	to choke
tshaŋ ³	hair standing on end
tshaŋ ⁴	the strokes in characters on scrolls
saŋ ²	to put fuel on fire
khaŋ ²	to lift the buttocks
khaŋ ³	to scratch or scrape away with one's nails
kaŋ ⁸	to clear the throat
haŋ ²	to threaten
haŋ ³	swollen
hak ⁴	food

Final Initial	-ŋ ¹	-ŋ ²	-ŋ ³	-ŋ ⁴	-ŋ ⁵	-ŋ ⁷	-ŋ ⁸
1. ɸ-	(央)	(影)	(向)	()	(黃)	(量)	
2. p-	(楓)	(榜)				(飯)	()
3. ph-							
4. m-	(芎)	(晚)			(毛)	(問)	(物)
5. t-	(當)	(轉)	(頓)		(長)	(斷)	(斷)
6. th-	(湯)		(脫)		(糖)	(杖)	
7. n-		(軟)	()		(榔)	(卵)	
8. ts-	(裝)	(指)	(鑽)		(全)	(狀)	()
9. tsh-	(穿)	()	(串)	()	(床)		()
10. s-	(酸)	(損)	(算)	()	()		
11. k-	(光)	(捲)	(鋼)				
12. kh-	(糠)	(壙)	(勸)				
13. ɣ-							
14. h-	(荒)	(呿)	()	()	(園)	(遠)	()
15. j-							

- ŋ²⁴ sound made to encourage baby to open its bowels
 pŋ²⁸ vivacious, active
 mŋ² late, either as to year, or proper time
 tŋ²⁸ same as tŋ¹ (the glottal version is used only in suburbs of Engchun)
 nŋ³ creep in or out
 tsŋ²⁸ test the flavour by licking
 tshŋ² suck a thing dry
 tshŋ²⁴ sniffing (outwards)
 tshŋ²⁸ stingy, ungenerous
 sŋ²⁴ sniffing (inwards)
 sŋ⁵ classifier of large cakes
 hŋ³ sound made in assent to something
 hŋ²⁴ sound made in scoffing at something
 hŋ²⁸ to sniffle inwards

Initial \ Final	-eŋ ¹	-eŋ ²	-eŋ ³	-ek ⁴	-eŋ ⁵	-eŋ ⁷	-ek ⁸
1. ɸ-	英	影	應	益	榮	詠	疫
2. p-	兵	餅	柄	百	平	病	白
3. ph-	崩		聘	碧	評	(並)	臂
4. b-		猛		覓	明	命	麥
5. t-	丁	等	綻	的	庭	定	敵
6. th-	廳	逞	聽 ³	踢	停		特
7. l-	(鈴)	冷	踉	勒	靈	令	曆
8. ts-	精	整	政	則	情	靜	賊
9. tsh-	清	請	銃	尺	(根)	(穿)	()
10. s-	聲	省	聖	色	成	盛	(熟)
11. k-	經	境	敬	格	(窮)	頸	極
12. kh-	輕	肯	慶	克	瓊	(虹)	
13. ɣ-		眼			迎	(硬)	逆
14. h-	兄	悻	興 ³	黑	行	杏	域
15. j-					仍		

tshek⁸

to shake

Initial \ Final	-un ¹	-un ²	-un ³	-ut ⁴	-un ⁵	-un ⁷	-ut ⁸
1. /-	溫	穩	()	鬱	云	韻	(畫)
2. p-	(分)	本	(羹)	不	(吹)	笨	亭
3. ph-	奔	()	漬	()	盆		
4. b-	()	吻		()	文	問	物
5. t-	敦	盾	頓	()	脣	鈍	突
6. th-	吞	(蠱)	()	黝出	()	(填)	()
7. l-	(倫)	(忍)	()	()	綸	(潤)	律
8. ts-	尊	準	俊	卒	存	(陣)	朮
9. tsh-	春	蠢	寸	出	(存)		
10. s-	孫	筍	舜	率	旬	順	術
11. k-	軍	魚	棍	骨	羣	君	滑
12. kh-	昆	菌	困	屈	困		()
13. ɣ-		(阮)					杌
14. h-	婚	粉	訓	忽	雲	份	佛
15. j-							

un³
 phun²
 phut⁴
 bun¹
 but⁴
 tut⁴
 thun²
 thun³
 thun⁵
 thut⁸
 lun³
 lut⁴
 khut⁸
 gun²

to dip in liquid
 said of chicken scratching the earth in search of food
 crooked, askew
 to cook food over slow fire
 to beat, hit
 as in kau tut tut 'very thick'
 stupid; doltish; to wriggle
 as in un thun 'obstinate, stupid, dull of comprehension'
 the young of an animal, adolescent
 as in thut kia 'to have a miscarriage'
 to burst away by violent efforts
 scald
 to have no offspring
 we (exclusive)

Final Initial	-an ¹	-an ²	-an ³	-at ⁴	-an ⁵	-an ⁷	-at ⁸
1. ø-	安	(阿)	按	(折)	()		
2. p-	班	版		八	(瓶)	辦	
3. ph-	攀		盼				
4. b-		(挽)			蠻	萬	(密)
5. t-	單	(等)	旦	()	彈	但	達
6. th-	漢佳	坦	炭	獺			()
7. l-	蘭	赤良		刺	難佳	爛	(力)
8. ts-	(曾)	盞	言贊	札	殘	贊	()
9. tsh-	餐	(刻)	燦	察	(田)		(賊)
10. s-	山	產	散	殺			
11. k-	間	簡	幹	割			
12. kh-	刊	侃	看	渴			
13. ɣ-	()	眼	滂		彥頁	岸	
14. h-	(番)	罕	漢	曷欠	寒	限	()
15. j-							

- an⁵ tight, narrow
- lan¹ as in ho⁵ lan¹ 'Holland'
- tat⁴ dangerously ill
- that⁸ pour off a liquid from the more or less solid part (which is kept back)
- tsat⁸ closely packed
- gan¹ a surname
- gan³ to chill with cold water
- han¹ as in han¹ tsu⁵ 'Sweet potato'
- hat⁸ limited

Initial \ Final							
	-uan ¹	-uan ²	-uan ³	-uat ⁴	-uan ⁵	-uan ⁷	-uat ⁸
1. p-	彎	宛	怨	輓	完	浣	越
2. p-	般		半			叛	跋
3. ph-	潘		絆	撥	盤	畔	
4. b-		晚		抹	瞞		末
5. t-	端	短	斷	歛	傳	緞	奪
6. th-	湍	暄	篆	脫	團		
7. l-	孿	暖		劣	巒	亂	撈
8. ts-	專	轉	鑽	拙	全	饌	絕
9. tsh-	村	喘	串		(殘)		
10. s-	宣	選	算	雪	旋	琬	
11. k-	官	管	慣	刮	權	倦	
12. kh-	寬	欸	釐	缺	圈		()
13. g-		玩		剛	原	願	月
14. h-	藺	反	販	髮	煩	飯	活
15. j-							

tshuan⁵ to harm

khuat⁸ to walk everywhere with shoes on

Final Initial	-ən ¹	-ən ²	-ən ³	-ət ⁴	-ən ⁵	-ən ⁷	-ət ⁸
1. ɸ-	恩	隱	()		()		
2. p-							
3. ph-							
4. b-							
5. t-							
6. th-							
7. l-							
8. ts-							
9. tsh-							
10. s-							
11. k-	跟					近	()
12. kh-	坤	懇	(斬)		勤		
13. ɣ-			()	迄	銀		
14. h-		()			痕	恨	核
15. j-							

ən³ dull pain

ən⁵ layer

kət⁸ thick, strong of liquids

ɣən³ to hate

hən² to hurry

Final Initial		-ien ¹	-ien ²	-ien ³	-iet ⁴	-ien ⁵	-ien ⁷	-iet ⁸
1.	ø-	烟	衍	宴	閱	沿	院	悅
2.	p-	邊	貶	變	別	(便)	辨	別
3.	ph-	篇		片	撇			()
4.	b-		免			棉	面	滅
5.	t-	顛	屣	殿	哲	田	電	跌
6.	th-	天	薺	瑛	鐵	填		
7.	l-	(啣)	輦			年	練	列
8.	ts-	煎	剪	戰	節	前	賤	截
9.	tsh-	千	淺		切	()		
10.	s-	先	鮮	善	設	蟬	繕	舌
11.	k-	堅	藺	見	結	(凝)	健	竭
12.	kh-	牽	遣	()	孑	虔		()
13.	g-	妍	研	(癢)	(蝨)	言	犴	孽
14.	h-	軒	顯	獮	血	賢	現	穴
15.	j-	燃	撚			然		熱

piet⁴

to distinguish

piet⁸

to separate

phiet⁸

struggle to be freed, as of fish caught in net

thien³

name of a precious stone

tshien⁵

delay

khien³

mix glutinous things by stirring, as paste or dough

khiet⁸

hairless, clean shaven

gien³

to be extremely fond of, addicted to

giel⁴

worm eaten

gien⁷

name of a wild dog

Final Initial	-in ¹	-in ²	-in ³	-it ⁴	-in ⁵	-in ⁷	-it ⁸
1. ɸ-	因	引	印	一	寅	孕	
2. p-	賓	稟	髻	必	貧	嫵	帛
3. ph-	()	品		匹	()		()
4. b-		泯			民	(面)	蜜
5. t-	珍		鎮	(得)	塵	陣	直
6. th-				迫	(斟)	()	
7. l-	(乳)	您	()		鄰	磷	
8. ts-	真	賑	進	質	泰	盡	疾
9. tsh-	親	()	(清)	士			
10. s-	身	矧	信	失	辰	腎	實
11. k-	(今)	緊	(絹)	()		僅	
12. kh-	(輕)	(肯)		乞		()	(奎)
13. ʃ-							
14. h-				()	(眩)		()
15. j-					人	認	日

- phin¹ sort of creeper with a fruit like a fig
 phin⁵ to scatter things in a disorderly manner
 phit⁸ to scatter things in a disorderly manner
 thin⁵ to pour out, e.g. tea, wine
 thin⁷ to make equal
 lin³ very round
 tshin² shallow
 tshin³ cool, cold
 kit⁴ said of matter not easily settled
 khin⁷ sound as of noisy children or of moving heavy things
 khit⁸ to stick a piece of wood into the earth (local character)
 hit⁴ that
 hit⁸ oscillate, shake about

Final Initial	-am ¹	-am ²	-am ³	-ap ⁴	-am ⁵	-am ⁷	-ap ⁸
1. ɔ-	諳	(甘)	暗	鴨	()	頷	匣
2. p-							
3. ph-							
4. b-							
5. t-	擔	膽	擔 ³	答	談	淡	咎
6. th-	貪	毯	探	搨	覃		
7. l-	淦	覽		()	南	濫	糸內
8. ts-	(針)	斬	蘸	(汁)		(站)	雜
9. tsh-	參	慘	懺	歛	慙		
10. s-	三	糝	(毳)	(屑)		()	()
11. k-	甘	感	鑑	甲	(含)		()
12. kh-	堪	坎	嵌	恰	()		()
13. ɣ-			()	()	巖	(戇)	
14. h-	甘	菡	儼	()	含	陷	合
15. j-							

- am² liquid part of cooked rice porridge
 am⁵ to co-operate
 lap⁴ to kick
 san⁷ to approach slowly
 sap⁸ confused, not clear, untidy, as in ho⁵ sap⁸ sap⁸
 kap⁸ not clear (of liquids)
 khem⁵ to do something unwillingly
 khap⁸ to bang against, as head against wall
 gam³ hit against something when one falls down
 gap⁴ wedged in between
 hap⁴ open the mouth, as in eating

Initial \ Final		Final					
		-iam ¹	-iam ²	-iam ³	-iap ⁴	-iam ⁵	-iap ⁸
1.	ɸ-	厭	掩	厭	火華	鹽	豐色 葉
2.	p-						
3.	ph-						
4.	b-						
5.	t-	沾	黑占	店		() 墊	喋
6.	th-	添	詔	舌	帖	甜	(沉) (疊)
7.	l-	拈	飲		聶	黍占	念 臘
8.	ts-	尖	(枕)	占	接	潛	漸 ()
9.	tsh-	簽	金簪	僭	妾	鏡	
10.	s-	(瞻)	閃		(濕止)	檐	贍 涉
11.	k-	兼	減	劍	頰	(鹹)	趁
12.	kh-	謙	歉	欠	()	箝	儉
13.	g-		儼		(夾)	嚴	驗 業
14.	h-	炊	險	(喊)		嫌	協
15.	j-		染				(廿)

tiam⁵ to exert much strength

tsiap⁸ quick in doing things

siam¹ to peep

siap⁴ untidy

khiap⁴ seriously ill

giap⁴ wedged in between

Initial \ Final							
	-m ¹	-m ²	-m ³	-m ²⁴	-m ⁵	-m ⁷	-m ⁸
1. ɸ-		(女母)			(梅)	(不)	
2. p-							
3. ph-							
4. b-							
5. t-							
6. th-							
7. l-							
8. ts-	天 元 回	外 回	()				
9. tsh-							
10. s-	天 參						
11. k-							
12. kh-							
13. ɣ-							
14. h-	欣			()	()		()
15. j-							

tsm³

a personal name

hm²⁴

to beat very hard

hm⁵

howling of wild animals

hm⁸

to say very little

Initial \ Final							
	-im ¹	-im ²	-im ³	-ip ⁴	-im ⁵	-im ⁷	-ip ⁸
1. ɸ-	音	飲	蔭	邑	淫		
2. p-							
3. ph-							
4. b-							
5. t-	()		(擲)		沈	朕	
6. th-	環		鳩				
7. l-	(飲)	廩			林		立
8. ts-	甚	枕	浸	執	(蟬)		集
9. tsh-	深	寢		緝			
10. s-	心	審	沁	濕	尋	甚	十
11. k-	今	錦	禁	急		姦	及
12. kh-	欽	()		吸	琴		()
13. ɣ-		(錦)			吟		
14. h-			憾	歛	(熊)	(噤)	
15. j-		忍			壬	任	入

tim¹ reserved in manner, not frank, open or communicating

khim² a personal name

kip⁸ to lay hold of something to talk about

Final Initial	-a ¹	-a ²	-a ³	-a ⁴	-a ⁵	-a ⁷	-a ⁸
1. /-	丫	痘	亞	(鴨)		(諾)	(匣)
2. p-	巴	把	豹	(百)	爬	罷	
3. ph-	葩		怕	(打)		(庖)	
4. b-				(肉)	()	(碼)	
5. t-	(乾)	(那)		(搭)			(踏)
6. th-	(他)		詫	(塔)			(疊)
7. l-	拉				(勞)	()	(獵)
8. ts-	查	(早)	詐	()		鮚	(聞)
9. tsh-	差	炒	(鈔)	(插)	柴	(吵)	
10. s-	沙	灑			()		()
11. k-	佳	假	駕	(甲)		(咬)	(咬)
12. kh-	(脚)	(巧)	(叩)	(較)			
13. g-					牙	迓	
14. h-	哈		(孝)	()	霞	廈	(合)
15. j-							

ba⁵ wild cat

la⁷ stir things

tsa⁴ obstruct

tsha⁷ indistinct noise (as in tsha⁷ tshu⁷ hau²)

sa⁵ stupid

sa⁸ cook by boiling in water

ka⁸ same as ka⁷ (the glottal stop version is used only in suburban areas)

kha⁴ more, rather

ha⁴ to put something in the sun

Final Initial	-ua ¹	-ua ²	-ua ³	-ua ⁴	-ua ⁵	-ua ⁷	-ua ⁸
1. ɸ-	蛙	瓦	(按)	挖		(畫)	(活)
2. p-			(簸)	(撥)			()
3. ph-			(破)	(潑)			()
4. b-			()	(抹)	(磨)		(末)
5. t-			(帶)	(輓)	(淘)	(大)	(奪)
6. th-	(拖)		(泰)	(脫)		(汰)	
7. l-					(籬)	(賴)	()
8. ts-	抓	(紙)		()	(虫)	(誓)	(差)
9. tsh-			(蔡)	()		(導)	(斜)
10. s-	(沙)	耍	(續)	(煞)		(速)	
11. k-	瓜	(寡)	掛	(割)	(檟)		
12. kh-	誇	()	跨	(闊)		(譁)	
13. ɣ-		(我)				(外)	
14. h-	嘩		化	(喝)	華	話	()
15. j-						(若)	(熱)

pua ⁸	to fall down
phua ⁸	old wife
bua ³	to open
lua ⁸	to comb
tsua ⁴	shake
tsua ⁸	differ from
tshua ⁴	snatch by force
tshua ⁷	to lead a person
tehua ⁶	diagonal
kua ⁵	name of a tree
khua ²	a little (as in <u>sio² khua²</u>)
khua ⁷	noisy
hua ²	a scar, marks or traces

Final Initial	-ia ¹	-ia ²	-ia ³	-ia ⁴	-ia ⁵	-ia ⁷	-ia ⁸
1. ɔ-		里予	(厭)	(挖)	耶	夜	頁
2. p-				(壁)			
3. ph-				(癖)			()
4. b-							
5. t-	爹			(摘)			(采翟)
6. th-				(拆)			
7. l-				(摘)			(捕)
8. ts-	嗟	者	借	(隻)		藉	(食)
9. tsh-	奢	哆		(赤)	余斗		()
10. s-	賒	寫	舍	(削)	邪	社	(碩)
11. k-	迦		(寄)	()	(山支)	(山奇)	(屐)
12. kh-	(迦)			(隙)	(馬奇)	(豎)	(屐)
13. ɣ-			()		(我鳥)		(客頁)
14. h-	革化					(瓦)	(額)
15. j-	遮		惹	(跡)		(揮)	

phia⁸

measles

thia⁴

to tear

tshia⁸

on a slope

kia⁴

to carry up on the shoulder with a pole (with one person)

kia⁸same as kia⁵khia⁴

an occasion for dislike

khia⁸

wooden shoes

gia³

gaze stupidly

Initial \ Final							
	-ɔ ¹	-ɔ ²	-ɔ ³	-ɔɿ ⁴	-ɔ ⁵	-ɔ ⁷	-ɔɿ ⁸
1. ɸ-	烏	嘔	惡	()	胡	(芋)	
2. p-	褒	保	布		蒲	部	
3. ph-	波	普	鋪		菩	簿	
4. b-	摸	某			模	暮	
5. t-	都	堵	姑	()	徒	度	
6. th-	拖	土	吐		桃		
7. l-	()	魯			奴	路	
8. ts-	租	阻	佐		槽	助	
9. tsh-	初	楚	西昔				
10. s-	梳	所	素				
11. k-	高	古	顧		(糊)	(怙)	
12. kh-	(呼)	苦	靠		()		
13. ʂ-		伍			吳	誤	
14. h-	呼	虎	庠		何	怙	
15. j-							

ɔɿ⁴

to vomit

tɔɿ⁴

approaching with slow and dignified steps

lɔ¹

sound of loud reading

kɔ¹as in kɔ¹ kue¹ 'to round up chicken by calling them'kɔ⁵as in kɔ⁵ kɔ⁵ 'to do something in a slipshod manner'

Final Initial	-a ¹	-a ²	-a ³	-a ⁴	-a ⁵	-a ⁷	-a ⁸
1. p-	(鍋)		(穢)	(呃)	()	(禍)	(慳)
2. p-	(飛)	()	(襪)	()	(賠)	(倍)	
3. ph-	(胚)		(配)		(皮)	(被)	(沫)
4. b-	(咪)	(尾)		()	(糜)	(妹)	(襪)
5. t-	()	(短)	(跟)	(啄)		(袋)	(奪)
6. th-	(胎)		(退)				
7. l-		(侶)		()	(螺)	()	()
8. ts-	()		(睇)	(拮)		(坐)	(絲)
9. tsh-	(炊)	(髓)	(脆)	(嘅)	(筆)	(尋)	
10. s-	()		(稅)	(說)			(旋)
11. -		(粿)	(過)	(郭)			
12. kh-	(科)		(課)	(缺)	(瘤)		(愕)
13. ɣ-					()		(月)
14. h-	(灰)	(火)	(貨)		(回)	(會)	()
15. j-							

- a⁵
 pa² to come in a big group
 pa²⁴ chicken scratching the earth in search of food
 ba²⁴ children's disease
 ts¹ sound of laughing
 la¹⁴ to thrash
 la⁷ to pick up gently with the fingers
 la⁸ greedy, eating a lot
 ts¹ to repeat over and over again
 sa¹ epidemic
 ga⁵ to beat a child with a small cane
 ha⁸ stare at
 frightened or surprised expression

Final Initial	-u ¹	-u ²	-u ³	-u ⁴	-u ⁵	-u ⁷	-u ⁸
1. ϕ-	於	與	瘀		余	預	
2. p-							
3. ph-							
4. b-							
5. t-	豕者		著		除	箸	
6. th-		渚			鋤		
7. l-	()	女			閤	慮	
8. ts-	諸	子	漬		慈	自	
9. tsh-	差	此	次	()	疵		
10. s-	師	死	賜		詞	序	
11. k-	居	舉	據		渠	巨	(距)
12. kh-	祛		去				
13. g-		語			魚	御	
14. h-	虛	詡			(魚)		()
15. j-					如		

lu¹ sloping downwards

tshu⁴ bend down

hu⁸ sound of laughing

Final Initial	-ai ¹	-ai ²	-ai ³	-ai ⁴	-ai ⁵	-ai ⁷	-ai ⁸
1. ɸ-	哀	藹	愛		(愛)		
2. p-	(班)	(跛)	拜		牌	敗	
3. ph-		(呆)	派				
4. b-					埋	()	
5. t-	豈	歹	帶	()	臺	代	
6. th-	胎	(癩)	泰		(殺)	待	
7. l-					來	賴	
8. ts-	裁	滓	再		才	在	
9. tsh-	猜	採	菜		豺		
10. s-	(獅)	(屎)	賽			(事)	
11. k-	該	改	蓋				
12. kh-	開	愷	概				
13. g-		駭			涯	礙	
14. h-	()	海			孩	害	
15. j-							

pai¹ as in hia¹ pai¹ 'to boast'

bai⁷ to send greetings

tai⁴ walk unsteadily, as when a child first learns to walk

thai² as in thai² ko¹ 'leprosy'

hai¹ enormous

Final Initial		-uai ¹	-uai ²	-uai ³	-uai ⁴	-uai ⁵	-uai ⁷	-uai ⁸
1.	p-	丕	()					
2.	p-							
3.	ph-							
4.	b-							
5.	t-							
6.	th-							
7.	l-							
8.	ts-						()	
9.	tsh-							
10.	s-							
11.	k-	乖	拐	怪				
12.	kh-		(蹶)	快				
13.	g-							
14.	h-					懷	壞	
15.	j-							

uai² to row a small boat

tsuai⁷ to be bruised by a fall

Final Initial	-e ¹	-e ²	-e ³	-e ⁴	-e ⁵	-e ⁷	-e ⁸
1. ɸ-		(瘥)	縊	(阨)		(下)	()
2. p-	()	(把)	弊	(伯)		陞	(白)
3. ph-		()	(帕)				
4. b-		(馬)			迷	(謎)	(夢)
5. t-	低		帝	(壓)	(茶)	地	()
6. th-	梯	體	替	(惕)	提	(鮓)	(宅)
7. l-	()	禮			梨	例	(裂)
8. ts-	劑	擠	債	(仄)	齊	寨	
9. tsh-	妻	扯	(砌)	(冊)	(查)	()	()
10. s-	西	洗	世	(屑)		逝	()
11. k-	街	(假)	計	(格)	(枷)	(低)	鯁
12. kh-	稽	啓	憩	(客)	()	揭	()
13. ɣ-		睨			倪	藝	
14. h-	西 ^亮	()		()	奚	系	
15. j-							

e ⁸	dirty, filthy
pe ¹	eat with chopsticks
phe ²	go about as a poor vagrant or idle rowdy looking at plays and consorting with low characters
te ⁸	to ebb
le ¹	sound of singing
le ⁴	adjective to describe crying, as in <u>hau² le⁴ le⁴</u>
le ⁸	to slit open
tshe ⁷	sound of flowing water
tshe ⁸	sound made by dragging one's feet
se ⁸	to buy cheaply
khe ⁵	disagreeable
khe ^{2 8}	disagreeable
he ²	sound used in calling attention
he ⁴	gamble, bet

Final Initial	-ue ¹	-ue ²	-ue ³	-ue ⁴	-ue ⁵	-ue ⁷	-ue ⁸
1. ɸ-	𠂔	(矮)	穢		(鞋)	衛	(狹)
2. p-	(杯)		貝	(八)	陪	背	(拔)
3. ph-	批	(臀)	西己		(皮)	(稗)	()
4. b-	()	(買)			()	(賣)	
5. t-		(底)	𠂔		𠂔	兌	(狹)
6. th-	(釵)	()	退	()			(提)
7. l-		餒	(鑊)	()	(犁)	肉	(笠)
8. ts-			最	(節)	(齊)	(多)	(截)
9. tsh-	(初)		(刷)	(感)	(整)		
10. s-	衰	(洗)	歲	(塞)			
11. k-	(雞)	(改)	會	(鉗)	(魚)	(易)	(夾)
12. kh-	煖		(契)	()	()		()
13. ɣ-	()			(挾)	(倪)	外	(夾)
14. h-	(花)	悔	痿	()	回	會	
15. j-					耒	銳	

- bue¹ to walk about furtively
 bue⁵ rotten, over-ripe, smashed
 phue²⁸ a clod of earth
 thue² mimic
 thue⁴ fill up a gap
 lue⁴ unable to vomit, feeling sick
 tshue⁴ to sob quietly
 tshue⁵ to shuffle along
 kue⁷ easy
 khue⁴ crowded
 khue⁵ to lessen
 khue²⁸ troublesome person
 gue¹ slightly hurt, bruised
 hue⁴ to wink

Final Initial	-i ¹	-i ²	-i ³	-i ²⁴	-i ⁵	-i ⁷	-i ⁸
1. ɸ-	衣	椅	意	()	移	肄	()
2. p-	悲	彼	臂	(鼈)	脾	備	(燁)
3. ph-	披	鄙	譬	()	皮	被	
4. b-	(微)	美		(邊)	眉	媚	(篋)
5. t-	知	抵	智	(滴)	池	治	(石葉)
6. th-	粃	恥	滯	(銑)	(啼)	痔	()
7. l-	()	里		()	籬	利	(裂)
8. ts-	脂	指	志	(摺)	(*茲)	舐	(舌)
9. tsh-	嗤	齒	刺	(門)	持	市	(蠟)
10. s-	詩	始	(四)	(薛)	時	是	(蝕)
11. k-	基	几	記		奇	伎	()
12. kh-	欵	起	氣	(缺)	騎	忌	()
13. ɸ-		蟻			宜	誼	
14. h-	希	喜	戲	()		(耳)	()
15. j-					兒	二	()

- iɿ⁴ sound made to encourage child to stand up (cf. ㄣ⁴)
 iɿ⁸ a kind of Chinese soap
 piɿ⁸ sound of crackling fire, as in piɿ⁸ piɿ⁸ pial⁸ pial⁸
 phiɿ⁴ to prune
 thiɿ⁸ slow, dilatory
 liɿ to decline, make excuses
 liɿ⁴ hit a person in fun
 tshiɿ⁴ as in tshiɿ⁴ tshuaɿ⁴ 'lightning'
 tshiɿ⁸ a type of crab
 kiɿ⁸ sound of devil, or squeaking
 khiɿ⁸ }
 hiɿ⁴ } very thin
 hiɿ⁸ }
 jiɿ⁸ tread on

Final Initial	-ui ¹	-ui ²	-ui ³	-ui ² ⁴	-ui ⁵	-ui ⁷	-ui ² ⁸
1. ɸ-	威	偉	慰	(挖)	為	位	()
2. p-			痞		(肥)	(吠)	
3. ph-			(屁)				
4. b-							
5. t-	追		對		搵	隊	
6. th-	(梯)	腿	(替)		槌	(累)	
7. l-	(金雷)	藥			雷	類	
8. ts-	銼	(水)	醉		(率)	萃	
9. tsh-	吹	揣	碎	(挖)			
10. s-	雖	水	邃		隨	祟	
11. k-	歸	鬼	季	()	葵	跪	
12. kh-	虧	詭	愧				
13. g-					危	偽	
14. h-	飛	毀	費	(血)	肥	慧	
15. j-							

ui²⁸ eclipse (suburban pronunciation)

lui¹ small copper coins, hence, money, generally

thui³ as in thui³ ua⁷ 'to change the order of'

thui⁷ as in thua¹ thui⁷ 'to be involved in'

tshui²⁴ to dig out

kui²⁴ to scour

Initial \ Final	-au ¹	-au ²	-au ³	-au ⁴	-au ⁵	-au ⁷	-au ⁸
1. p-	凹	拗	(臭)		(喉)	(後)	
2. p-	包	飽			苞		(貿)
3. ph-	拋	跑	炮	(博)		抱	(電)
4. b-	(包)	卯			茅	貌	
5. t-	(兜)	(斗)	罩	()	(投)	(豆)	()
6. th-	(偷)	(斛)	(透)		(頭)	(毒)	
7. l-	叻	撓	(老)	()	(流)	鬧	
8. ts-	糟	(走)	灶	()	巢	櫟	
9. tsh-	抄	(草)	(臭)		()		
10. s-	梢	(稍)	(掃)	()			
11. k-	交	絞	教	()	(猴)	(厚)	()
12. kh-	敲	巧	(哭)	()			()
13. ʃ-					(賢)	(樂)	
14. h-	嚮	(吼)	孝	()	(候)	交	
15. j-							

au³

rotten

pau²⁸

bargain or contract for in the lump, as work or goods

tau²⁴as in tui⁷ tau²⁴tau²⁴ 'hard, stiff'tau²⁸

constantly speaking

thau⁷

to kill by poisoning

lau²⁴as in ku⁷lau²⁴khau²⁴ 'very old'tsau²⁴as in ʃ²tsau²⁴tsau²⁴ 'very black'tshau⁵

to move

sau²⁴as in lau²⁴sau²⁴ 'an assorted collection of things'kau²⁴

mix eatables, esp. putting one inside another

kau²⁸

cook rice porridge

khau²⁴as in gi⁷khau²⁴khau²⁴ 'very hard' (cf. gi⁷khiau²⁴khiau²⁴)khau²⁸

cook for a long time

hau²⁴

peeling off, as paint, skin, seals

Final Initial	-iau ¹	-iau ²	-iau ³	-iau ⁴	-iau ⁵	-iau ⁷	-iau ⁸
1. ɿ-	腰	歹	要		遙	火曜	
2. p-		女表					
3. pʰ-	標	剝	票		嫖		
4. b-	(瞄)	眇			苗	廟	
5. t-	朝	()	鈞		條	調	()
6. tʰ-	挑	窈	跳		(魚兆)	(柱)	
7. l-		了		()	聊	料	
8. ts-	招	沼	照	()	焦	(全)	()
9. tsh-	超	稍	笑	()	鈇		()
10. s-	消	小	少		(精)	紹	
11. k-	馬橋	繳	叫	()	喬	轎	()
12. kh-	蹺	(巧)	徼	()	()		()
13. ɣ-				()	堯		
14. h-	馬堯	曉	()	(諺)	嫖		
15. j-		爪	(抓)		()	尿	

- tiaü² to speak with a foreign accent
 tiaü⁸ to make an idol
 thiau⁵ name of a fish
 liaü²⁴ gossip
 tsiaü⁴ to make a lot of noise in eating
 tsiaü⁸ incessant talking
 tshiaü²⁴ a bamboo instrument used as accompaniment in some songs
 kiaü⁴ upstroke in writing
 kiaü⁸ to make a lot of noise by talking
 khiaü²⁴ as in ŋi⁷ khiaü⁴ khiaü⁴ 'very hard'
 khiaü⁵ to pester for attention as a little child
 khiaü⁸ as in khiaü⁸ ko⁷ 'empty promises'
 hiau³ rumour
 jiau⁸ wrinkled
 tshiaü⁸ clattering of sound of shoes worn loosely or on wet ground

Final Initial	-o ¹	-o ²	-o ³	-o ² ⁴	-o ⁵	-o ⁷	-o ² ⁸
1. ɸ-	()	襖	奧	(莫佳)	(蠟)		(學)
2. p-	菠	寶	(報)	(駁)	婆		(薄)
3. ph-	(坡)		()	(粕)		(抱)	(抱)
4. b-				(要)	(無)	(帽)	(膜)
5. t-	(刀)	(倒)	(到)	(桌)	(逃)	(道)	()
6. th-	(叨)	(討)	套		(桃)		
7. l-	(烙)	腦			金羅	(裸)	(落)
8. ts-	(遭)	(枣)	(估)	(作)	(槽)	(造)	()
9. tsh-	(臊)	(草)	(錯)	()			
10. s-	(梭)	(鎖)	(燥)	(索)	()	(唆)	(銖)
11. k-	哥	稿	(告)	(摺)	(筍)	()	()
12. kh-	()	考	()				()
13. g-					(熬)	(餓)	
14. h-	()	(好)		()	(何)	(賀)	(霍鳥)
15. j-							

o ¹	to praise
pho ² ⁴	sediment, dregs
pho ³	soft food
pho ² ⁸	same as pho ⁷ (suburban pronunciation)
to ² ⁸	said of a burning fire
tho ¹	said of a duck picking at its food
tso ² ⁸	rush around wildly
tsho ² ⁴	scolding with obscene language
so ⁵	crawl, creep
ko ² ⁸	pollute, infect (suburban pronunciation)
kho ¹	to cook for a very long time
kho ³	uncomfortable
ho ¹	bargain endlessly
ho ² ⁴	cook with very little water

Initial \ Final							
	-io ¹	-io ²	-io ³	-io ⁴	-io ⁵	-io ⁷	-io ⁸
1. ɸ-	(腰)	(鴿)		(約)	(搖)	()	(藥)
2. p-	()	(表)					
3. ph-			(票)		(萍)		
4. b-		()				(廟)	
5. t-			(釣)	(着)	()	(鈔)	(着)
6. th-	(挑)		(耀)				
7. l-			(高)		(撈)		(畧)
8. ts-	(招)	(少)	(照)	(借)			(石)
9. tsh-	(鴿)		(笑)	(尺)		(照)	(蓆)
10. s-	(燒)	(小)		(惜)	()		(俗)
11. k-			(叫)	(脚)	(橋)	(轎)	
12. kh-				(拾)			
13. g-					(蟻)	(蕎)	()
14. h-				(息)			(葉)
15. j-						(尿)	

io⁷

happy

pio¹

to play

bio²

unsteady

tio⁵

shake and jump about as article in moving vehicle

sio⁵

slow-moving

gio⁸

said of things not moving smoothly

Final Initial	-u ¹	-u ²	-u ³	-u ⁴	-u ⁵	-u ⁷	-u ⁸
1. ㄅ	汙	雨	煦		盂	芋	
2. p-	()		(富)	()	(夸包)	()	()
3. ph-	()	()			(浮)	()	()
4. b-	()	武			無	務	
5. t-	株	(抵)		()	廚	()	()
6. th-				()	()		()
7. l-	()		()	()			
8. ts-	朱	主	注	()		聚	
9. tsh-	樞	取	趣	()		娶	
10. s-	須	璽	樹	(吸)	殊	曙	()
11. k-	龜	(久)	句	()	衢	具	()
12. kh-	區			(屈)	()	懼	()
13. g-					虞	遇	
14. h-	夫	甫	赴		扶	負	()
15. j-		乳			儒	裕	

pul empty, indiscreet bragging
 pu²⁴ to burst out, as something too
 tightly packed
 pu⁷ to hatch eggs
 pu²⁸ insipid in taste
 phu¹ use the mouth to whistle
 phu² turn slightly mouldy
 phu⁷ sound of birds flying away
 phu²⁸ a lump of excrement
 bu¹ to pile up
 tu²⁴ nod the head sleepily or in
 assent
 tu⁷ sulk
 tu²⁸ poke with a stick

thu²⁴ feeling one's way around with
 a stick
 thu⁵ delay
 thu²⁸ stupid
 lu¹ use hands to push away
 lu³ rub out
 lu²⁴ to limp
 tsu²⁴ feeling of indigestion
 tshu²⁴ to go off without much noise,
 as a bad cracker
 su²⁸ lonely, unsympathized
 ku²⁴ suck (suburban pronunciation)
 ku²⁸ sound of water being drunk
 khu⁵ to squat
 hu²⁸ sound used in driving away fowls

Final Initial		-iu ¹	-iu ²	-iu ³	-iu ²⁴	-iu ⁵	-iu ⁷	-iu ⁸
1.	ɔ-	憂	有	幼	()	遊	又	
2.	p-	彪						()
3.	ph-				()			
4.	b-					(繆)	謬	
5.	t-	丟	肘	晝	()	儔	宙	
6.	th-	抽	丑					
7.	l-	鯨	柳	溜	()	留	()	
8.	ts-	周	洒	呪	()	揪	就	()
9.	tsh-	秋	帚	揪		愁	(樹)	
10.	s-	收	首	秀	()	囚	壽	
11.	k-	(紉)	九	救	()	求	咎	()
12.	kh-	鳩	(扭)		()	()	()	
13.	g-		(扭)			牛		
14.	h-	休	缶	臭		(裘)	紉	()
15.	j-		蹂			柔		

- iu²⁴ very cold (as in tshin³ iu²⁴ iu²⁴)
 piu⁸ to burst out, as something too tightly packed
 phiu²⁴ to run away, escape
 tiu²⁴ dull pain (as in tiu²⁴ tiu²⁴ thia³)
 liu²⁴ slip down, demoted
 liu⁷ soften in a covered rice-boiler, as cakes
 tsiu²⁴ soft and muddy
 tsiu⁸ soft and muddy
 siu²⁴ very yellow (as in ŋ⁵ siu²⁴ siu²⁴)
 kiu²⁴ very sour (as in sq⁵ kiu²⁴ kiu²⁴)
 kiu⁸ chirping of birds, squeaking of rats
 khiu²⁴ very tough and elastic
 khiu⁵ to curl up
 khiu⁷ tough and elastic
 hui⁸ about to die (as in hui⁸ hui⁸).

Final Initial	-a ¹	-a ²	-a ³	-a ⁴	-a ⁵	-a ⁷	-a ⁸
1. ɸ-	()	(倚)	()		()	(餛)	
2. p-	()						
3. ph-	()		(右)				
4. m-	媽	馬		麼	(痲)	罵	
5. t-	(擔)	(膽)	(擔)		()	(錯)	
6. th-	他	(坦)			()	()	
7. n-		拿	()	(塌)	(籃)	(若)	()
8. ts-		()	()		()		
9. tsh-						()	()
10. s-	(三)		()	(啞)	()		
11. k-	(監)	(敢)	(酵)		(含)		
12. kh-	(土甘)				(含)		
13. ŋ-		牙佳					
14. h-	()				()	()	
15. j-							

a ¹	imitative sound	tsā ²	cut off straight and even
a ³	stoop	tsā ³	dry in the sun for a little while
a ⁵	to take sides, back somebody up	tsā ⁵	jump to reach something high up
pā ¹	sound of crying	tshā ⁷	confused noise of gongs, drums
phā ¹	sound of many people crying	tshā ⁸	taken unawares, as when unable to answer a question thrust upon one
tā ¹	carry on pole over shoulder (one person)		
tā ³	burden, load	sā ³	doing things in a negligent way
tā ⁵	to overlap, do something twice over	sā ⁴	to snatch at food greedily
thā ⁵	to have a snack	sā ⁵	to catch eagerly at something thrown to one
thā ⁷	to adorn	hā ¹	sound of drums and trumpets
nā ³	protrude tongue rapidly	hā ⁵	leave slightly ajar
nā ⁸	tongue of flame	hā ⁷	growl like a dog

Final Initial	-ua ¹	-ua ²	-ua ³	-ua ⁴	-ua ⁵	-ua ⁷	-ua ⁸
1. ɸ-	(鞍)	(碗)	(晏)		(搥)	(換)	
2. p-	(扮)	(飯)	(半)		(盤)	(拂)	
3. ph-	(潘)		(判)		(踰)	(伴)	(絆)
4. m-	(披)	(滿)			(麻)		(末)
5. t-	(單)	()	(旦)		(壇)	(段)	
6. th-	(漢)	()	(炭)				
7. n-		()	()		(欄)	(爛)	
8. ts-	(煎)	(盞)			(泉)	(淺)	
9. tsh-	()	(癢)	(門)		()	(魚單)	
10. s-	(山)	(散)	(線)				
11. k-	(官)	(趕)			(寒)	(汗)	
12. kh-	(寬)	(款)	(看)				
13. ŋ-							
14. h-	(歡)	()			(軒)	(岸)	(跬)
15. j-							

tūa²tūa³thūa²nūa²nūa³tshūa²tshūa¹tshūa³tshūa⁵hūa¹hūa²

constantly

actor, as in a play

to uproot or cut away about the roots with a hoe, as small plants

knead

lie on the bed tossing about

eruptions on the skin

to be bruised by a splinter

shut, close

to pull out quickly

happy, as in hūa¹ hi²

to pass over very carelessly

Final Initial	-ia ¹	-ia ²	-ia ³	-ia ⁴	-ia ⁵	-ia ⁷	-ia ⁸
1. ㄉ-	(映)	(影)	(映)	()	(營)	(風易)	
2. ㄆ-	(兵)	(餅)	()		()		
3. ㄆh-	(骨餅)	()			(坪)		
4. ㄇ-					(名)	(命)	
5. ㄊ-	()	(鼎)	(碇)		(庭)	(定)	
6. ㄊh-	(聽)	(埕)	(痛)		(程)	(痛)	
7. ㄋ-		(領)		()	(娘)		
8. ㄊs-	(正)	(淡)	()		(成)		
9. ㄊsh-	(清)	(諍)	(倩)		(成)		
10. ㄙ-	(聲)	()	(聖)		(城)	(櫓)	
11. ㄎ-	(驚)	(子)	(鏡)		(行)	(件)	
12. ㄎh-	(輕)		(慶)				
13. ㄋ̃-					()		(愕)
14. ㄏ-	(兄)	()	(向)	()	(燃)	(艾)	
15. ㄐ-							

ia ² ₄	carry on the back
piā ³	to pour out in bulk
piā ⁵	to copy, as a document
phia ²	thick, flattish piece
tia ¹	to stumble against
thia ²	fields on the sea shore where the razor clam are cultivated
nīa ¹ ₄	to open the eyes and look upwards
tsiā ³	real
tsiā ⁵	to become
tshia ¹	as in hok ⁴ tshia ¹ , name of a province
tshia ⁵	to complete
sia ²	what, which, as in sia ² mī ⁴
sia ³	holy, as in sia ³ put ⁸
khia ¹	light, small, insignificant, (said to be a bad omen)
ŋia ⁵	go out to receive ceremoniously
hia ²	pleasing to the eye, as in hia ² bak ⁸
hia ³	to make new
hia ⁴	fetch clothes

Final Initial	-i ¹	-i ²	-i ³	-i ⁴	-i ⁵	-i ⁷	-i ⁸
1. ɸ-	(嬰)		(燕)	()	(圓)	(院)	()
2. p-	(邊)	(扁)	(柄)		(平)	(病)	(弊)
3. ph-	()		(片)		(杼)	()	
4. m-	()			(七)	(冥)	(麥)	
5. t-	(甜)		()		(纏)	()	
6. th-	(天)		(撐)			(縫)	()
7. n-	(奶)	(染)	(企)	()	(年)		(捏)
8. ts-	(爭)	(井)	(箭)		(錢)		
9. tsh-	(星)	(醒)	(刺)		()	()	
10. s-	(生)		(姓)		(豉)	(西)	()
11. k-	(餒)	(勑)	(見)	()	(漳)		
12. kh-	(坑)				(甘)		()
13. ŋ-						(硬)	
14. h-	()		()	(希)	(絃)	(石)	(見)
15. j-		耳					

i⁴ sound made to encourage a child
 to stand up, as in i⁴ tshian⁷
 i⁸ to make a noise
 pi⁸ plait (suburban pronunciation)
 phi¹ cheap
 phi⁵ to make level or even
 phi⁷ unwilling
 mi¹ to take up in the hand by putting
 all the fingers into something
 ti³ pretend
 ti⁷ prop up, as door with wood
 hi¹ sound of mosquitoes

thi⁸ to increase
 ni⁴ to wink
 tshi⁵ reach for something too
 high up or too far front
 tshi⁷ writing instrument used
 in olden days
 si⁸ sound of eating something
 crunchy
 ki² a flail
 ki⁴ to sniff loudly
 khi⁸ to strangle
 hi³ to fling

Final Initial	-ui ¹	-ui ²	-ui ³	-ui ⁴	-ui ⁵	-ui ⁷	-ui ⁸
1. ɸ-		(喂)		()	(閒)		
2. p-		(反)			()		
3. ph-							
4. m-		每		()	梅	妹	()
5. t-		(回)	(店)		(填)	(硬)	
6. th-							
7. n-							
8. ts-		(指)			(前)		
9. tsh-	(千)	(刷)		()			
10. s-	(先)						
11. k-	(鬚)	(選)	(慣)		(高)	(縣)	
12. kh-		(軌)	()	()			
13. ŋ-		(石杆)					
14. h-					(橫)		
15. j-							

ui⁴

sound made to encourage child to stand up

pui⁵

a half or portion

mui⁴

to eat without teeth

mui⁸very tiny, as in iu³ mui⁸ mui⁸tshui⁴

to sob quietly

kui³accustomed to, as in kui³ si³ (suburban pronunciation of kuan³ si³)khui³comfortable, as in khui³ ua⁸khui⁴

proud and obstinate

Final Initial	-iu ¹	-iu ²	-iu ³	-iu ⁴	-iu ⁵	-iu ⁷	-iu ⁸
1. ɸ-	(鴛)	(養)			(羊)	(樣)	
2. p-							
3. ph-							
4. m-							
5. t-	(張)	(長)	(脹)		(場)	(丈)	
6. th-							
7. n-	()	(兩)			(量)	(讓)	
8. ts-	(將)	(漿)	(醬)		(裳)	(上)	
9. tsh-	(魚)	(搶)	(唱)		(牆)	(象)	
10. s-	(相)	(賞)	(相)		(常)	(想)	
11. k-	(薑)					(強)	
12. kh-	(腔)						
13. ŋ-							
14. h-	(香)	(響)	(向)				()
15. j-							

niū¹ to eat very little

niū² an ounce, a tael (Chinese measure)

siū³ as in tsai² siū³ 'prime minister'

kiū⁷ stubborn

khīū¹ 'accent

hiū⁸ to be insulted

Final Initial		-ai ¹	-ai ²	-ai ³	-ai ⁴	-ai ⁵	-ai ⁷	-ai ⁸
1.	ø-	()	()				()	
2.	p-							
3.	ph-							
4.	m-	(麼)	買				賣	
5.	t-		()		()			
6.	th-							
7.	n-		乃				耐	
8.	ts-		(怎)					
9.	tsh-							
10.	s-							
11.	k-							
12.	kh-		()					
13.	ŋ-							
14.	h-				()		()	
15.	j-							

- ai¹ contracted form from an¹ ni¹ 'like this'
- ai² to move around clumsily as one encumbered by something
- ai⁷ musical instrument
- tai² walk slowly
- tai⁴ walk slowly like an old man
- khai² hit with the knuckles
- hai⁴ exclamatory remark made about loss of something, like 'alas!'
- hai⁷ to sigh

Final Initial	-uai ¹	-uai ²	-uai ³	-uai ⁴	-uai ⁵	-uai ⁷	-uai ⁸
1. ϕ-	()			()			()
2. p-							
3. ph-							
4. m-							
5. t-							
6. th-							
7. n-							
8. ts-							
9. tsh-							
10. s-		()		()	()		
11. k-				()			()
12. kh-		()					
13. ŋ-							
14. h-							
15. j-							

uai¹ sound of moving vehicle

uai⁴, uai⁸ sound of doors creaking

suai² a personal name

suai⁴ sound of a sedan chair as it is swung when carried

suai⁵ clownish, uncouth, said of a villager

kuai⁴ }
kuai⁸ } sound of things being rubbed together

khuai² to trip over something while walking

Final Initial	-au ¹	-au ²	-au ³	-au ⁴	-au ⁵	-au ⁷	-au ⁸
1. ø-				()	()		
2. p-							
3. ph-							
4. m-				()			()
5. t-							
6. th-							
7. n-				()			
8. ts-							
9. tsh-							
10. s-							()
11. k-							
12. kh-				()			
13. ŋ-						()	
14. h-							
15. j-							

- au⁴ fat-faced, ugly
 au⁵ to complain against
 mau⁴ toothless mouth
 mau⁸ things sold cheaply as at a sale
 nau⁴ curse
 sau⁸ unhealthy
 khau⁴ sound as of chewing nuts
 ŋau⁷ complain ceaselessly

Final Initial	-iau ¹	-iau ²	-iau ³	-iau ⁴	-iau ⁵	-iau ⁷	-iau ⁸
1. ㄉ-	()						
2. ㄆ-							
3. ㄆh-							
4. ㄇ-							
5. ㄊ-	()	()					
6. ㄊh-							
7. ㄋ-	貓	鳥	()				
8. ㄊs-							
9. ㄊsh-							
10. ㄙ-				()			()
11. ㄎ-							
12. ㄎh-							
13. ㄋ-	()			()		()	()
14. ㄏ-							
15. ㄐ-							

iau¹

cry of a cat

tia¹

sound of bell ringing

tia²

sound made by child seeking attention

nia³

spotty and freckled face

sia⁴sia⁸

sound made in eating something crisp or crunchy

nia¹

tickle

nia⁴

die

nia⁷

wanting to show off

nia⁸

move listlessly

Final Initial	-5 ¹	-5 ²	-5 ³	-5 ⁴	-5 ⁵	-5 ⁷	-5 ⁸
1. p-							
2. p-							
3. ph-							
4. m-	()	(麼)		(投)	毛	(冒)	
5. t-							
6. th-							
7. n-	僕佳	老					
8. ts-							
9. tsh-							
10. s-							
11. k-							
12. kh-		(考)					
13. ŋ-		我			娥	倭文	
14. h-		好	()				
15. j-							

m5¹

to hit with the hand

m5⁷as in kam² m5⁷ 'to have a cold'h5³

sound made in assent to something

APPENDIX IILIST OF LOAN WORDSMALAY LOANS:NOUNS:

	<u>Hokkien pronunciation</u>	<u>Pitch value</u>	<u>Malay pronunciation</u>	<u>Meaning</u>
1.	a kat	7 √	akal	skill, tact
2.	a tap	7 √	attap	thatched roof
3.	ba lu	┘ √	bahru	just now
4.	bɔŋ	7	lomboy	a mine
5.	bu la tsian	┘ ┘ 7	balachan	dried shrimp paste
6.	ha bit	√ 7	habis	finish
7.	jia ga	7 ┘	jaga	watchman
8.	jia gɔŋ	7 ┘	jagoy	maize
9.	jiam bu	7 ┘	jambu	a fruit
10.	jiam gan	7 7	jamban	lavatory
11.	ka tsiaŋ	7 7	kacaŋ	nut
12.	kam kɔŋ	√ 7	kampon	village
13.	kan taŋ	7 7	gantaŋ	unit of weight
14.	lo thi	┘ 7	roti	bread
15.	loŋ kau	┘ 7	loŋkau	drain
16.	lui	7	duit	money
17.	ma ta	7 7	mata-mata	policeman
18.	pa laŋ to	7 7 7	paraŋ	field knife (+ to)
19.	pa sat	7 √	pasar	market
20.	sa la	7 ┘	salah	wrong
21.	sa loŋ	7 7	saroy	Malay costume

22.	sa te	7 7	sate	pieces of meat cooked on a skewer
23.	sam pan	7 √	sampan	small boat
24.	sap bun	√ 1	sabun (via Portuguese)	soap
25.	so tan	7 7	sultan	Malay ruler
26.	tɔ lɔŋ	┘ 1	toloŋ	to help, please ¹
27.	tɔŋ kat	┘ √	toŋkat	walking-stick
28.	tĩ bun	7 ┘	timun	cucumber
29.	tu kaŋ	7 7	tukaŋ	carpenter
30.	tuan	7	tuan	sir, Mr.
31.	tseɿ	√	cheɿ	sir, Mr.
32.	in tseɿ	7 √	incheɿ	sir, Mr.

VERBS:

	<u>Hokkien pronunciation</u>	<u>Pitch value</u>	<u>Malay pronunciation</u>	<u>Meaning</u>
33.	bit tsa la	┘ 7 1	bichara	go to court
34.	ga lo	┘ ┘	gado	quarrel
35.	jia ga	1 ┘	jaga	watch
36.	ka tsiau	7 7	kachor	disturb
37.	kau in	7 1	kauin	marry
38.	kɔŋ si	7 7	koŋsi	join together
39.	lɔŋ paŋ	┘ 7	tumpaŋ	hitch a ride
40.	ɔ taŋ	7 ┘	utaŋ	be in debt
41.	pa kat	7 √	pakat	conspire
42.	pa ke	1 7	pake	use

¹ Henderson (1951) treats this as Chinese in origin. It might well be a case of indirect borrowing, from Malay, via Chinese, into Thai. As far as Chinese speakers are concerned, they consider this word as a loan from Malay.

43.	sa iaŋ	7 7	sayaŋ	love, pity
44.	su kaɿ	7 √	suka	like
45.	tā han	1 J	tahan	endure
46.	tiam	J	diam	stay at
47.	tɔŋ ku	7 1	tunɡu	wait for
48.	tsiam po	7 7	chiampor	to mix with

ADJECTIVES:

	<u>Hokkien pronunciation</u>	<u>Pitch value</u>	<u>Malay pronunciation</u>	<u>Meaning</u>
49.	a gaɿ	7 √	agak	about
50.	ba lu	J √	bahru	just
51.	bo lo	J J	bodoh	stupid
52.	gi la	J 7	gila	mad
53.	ko sɔŋ	7 7	kosonɡ	empty
54.	ma na	1 √	mana	where
55.	ma tsiam	1 7	macham	like, for example
56.	sa la	7 J	salah	wrong
57.	sin naŋ	7 7	sənaŋ	easy
58.	sɔŋ bɔŋ	7 J	sombonɡ	proud, haughty
59.	tap pi	J 1	tabi	but
60.	thiam thiam	J J	diam diam	quiet

ENGLISH LOANS:

	<u>Hokkien pronunciation</u>	<u>Pitch value</u>	<u>English</u>
1.	baŋ git	J √	mangosteen
2.	bit tsiu	J √	beer (+ tsiu)
3.	bue	√	boy!
4.	gu ni tə	J 7 J	gunny sack, burlap bag (+ tə)

	<u>Hokkien pronunciation</u>	<u>Pitch value</u>	<u>English</u>
5.	ka li	7 √	curry
6.	kam sim	7 7	commission
7.	kekopi	7 7	coffee
8.	ko li hu kiu	7 1 1 1	golf (+ kiu)
9.	kok	1	court
10.	koŋ pan ge	7 7 1	company
11.	ku li	7 √	coolie, labourer
12.	kun tek lek	7 √ 1	contractor
13.	khep	√	cave
14.	khu lok po	1 1 1	club
15.	le sin	1 7	license
16.	li o	7 7	D.O. (district officer)
17.	liu lien	1 1	durian, a Malayan fruit
18.	lo bi	1 7	dhoby, laundry
19.	lo li	1 √	lorry
20.	lok tɛ	1 √	doctor
21.	lut	1	route, used in names of roads
22.	mai	√	mile
23.	mĩ si	1 7	missie, nurse
24.	mo sek	1 √	mosaic
25.	mo teŋ	1 7	modern
26.	o ki	1 7	orchid
27.	o pit	1 1	office
28.	pat sien	√ 7	percent
29.	pe li	7 √	ferry
30.	po le tsu	7 1 √	magistrate, D.O. (police + tsu)

	<u>Hokkien pronunciation</u>	<u>Pitch value</u>	<u>English</u>
31.	po sw kat	7 7 7	postcard
32.	pɔŋ	7	pound
33.	pa sw tshia bas, bat	7 7 7 7 7	bus (+ tsia)
34.	sa huat	7 7	sofa, divan, couch
35.	sam an	7 7	summons
36.	sit tin	7 7	stamp (via Malay setem)
37.	si ku tə	7 7 7	scooter
38.	tai ia	7 7	tyre
39.	tek si	7 7	taxi
40.	tun	7	ton
41.	tsek	7	cheque
42.	tsiu pa	7 7	bar (for drinks)



Eden Grove Band

BIBLIOGRAPHY

BIBLIOGRAPHY

- Abercrombie, D. (1967), Elements of General Phonetics. Edinburgh: University Press.
- Barclay, T. (1923), Supplement to Dictionary of the Vernacular or Spoken Language of Amoy (Rev. Carstairs Douglas, M.A. LL.D. Glasg.). Shanghai: Commercial Press.
- Bodman, N. C. (1955), Spoken Amoy Hokkien, 2 vols. Kuala Lumpur: Charles Grenier & Son Ltd.
- Campbell, W. (1913), A Dictionary of the Amoy Vernacular. Shanghai: Presbyterian Mission Press.
- Chang, C. (1957), T'an Pei-ching-hua te in-wei (Peking phonemes) CKYW 56. 13-15.
張靜 談北京話的音位
- Chang, N. C. T. (1958), Tones and Intonation in the Chengtu Dialect (Szechuan, China). Phonetica 2. 59-85.
- Chao, Y. R. (1933), Tone and intonation in Chinese. BIHP 4. 121-134.
- Chao, Y. R. (1947), Cantonese Primer. Cambridge, Mass.: Harvard University Press.
- Chao, Y. R. (1948), Mandarin Primer. Cambridge, Mass.: Harvard University Press.
- Chao, Y. R., Ting, S. S., Yang, S. F., Wu, T. C., & Tung, T. H., Hupeh Fang Yen Tiao Ch'a Pao Kao. (Report on a Survey of the Dialects in Hupeh). 2 vols. Monograph of BIHP. Shanghai.
- Chao, Y. R. (1951), T'ai-shan yü liao. (On the linguistic materials of T'aishan, Kwangtung). BIHP 23. 25-76.
- Cheng, R. L. (1966), Mandarin phonological structure. JL 2. 135-158.
- Ch'eng, H. H. (1957), Kuan-yü p'u-t'ung-hua te in wei. (Phonemes of the common language). 程祥徵 關於普通話的音位
CKYW 60. 25-26.
- Chiu, B. M. (1931 a), The phonetic structure and tone behaviour in Hagu (commonly known as the Amoy dialect) and their relation to certain questions in Chinese linguistics. TP 28. 245-342.
- Chiu, B. M. (1931 b), The tone behaviour in Hagu: an experimental study. Archives Neerlandaises de phonétique expérimentale, 6. 6-45.
- Chomsky, N. (1964), Current Issues in Linguistic Theory. (Janua Linguarum, 38.) The Hague: Mouton.
- Chou, Y. W. (1958), Tsen-yang ch'u-li sheng-tiao tsai yin-wei hsi-t'ung chung te ti-wei wen-t'i. (Tones in the phonemic system.) CKYW 68. 88-89, 53.
周耀文 怎樣處理聲調在音位系統中的地位問題

Crystal, D. (1966), The linguistic status of prosodic and paralinguistic features. Proceedings of the University of Newcastle-upon-Tyne Philosophical Society, Vol. 1, No. 8. 93-108.

Douglas, C. (1873), Chinese-English Dictionary of the Vernacular or Spoken Language of Amoy with the principal variations of the Chang-chew and Chin-chew dialects. London:

Downer, G. B. (1963), Traditional Chinese phonology. TPhS. 127-142.

Egerod, S. (1956), The Lungtu Dialect: A descriptive and historical study of a South Chinese idiom. Copenhagen: Ejnar Munksgaard, Ltd.

Fang yen hū p'u-t'ung-hua chi k'an. (1958). (collection of articles in the Chinese dialects as compared with the common language.) 4 vols.
Wen-tzu kai-ko ch'u-pan-she.

方言與普通話集刊 · 文字改革出版社

Firth, J. R. & Rodgers, B. B. (1935-37), The structure of the Chinese monosyllable in a Hunanese dialect (Changsha). BSOS 8. 1055-74. Reprint J. R. Firth, Papers in Linguistics, 76-91.

Fu, M. C. (1957), Pei-ching hua te in-wei he p'ing in tzu mu. (Peking phonemes and the romanization system). CKYW 47. 2-12.

北京話的音位和拼音字母

Fudge, E. C., (1967), The nature of phonological primes. JL 3. 1-36.

Fudge, E. C. (1968), Mutation rules and ordering in phonology. JL 4.

Halliday, M. A. K. (1959), The Language of the Chinese 'Secret History of the Mongols'. Publications of the Philological Society 17: Oxford: Blackwell.

Halliday, M. A. K. (1967), Notes on transitivity and theme in English : Part 2. JL 3. 199-244.

Halliday, M. A. K., McIntosh, A. & Stevens, P. (1965), The Linguistic Sciences and Language Teaching. London: Longmans.

Hartman, L. M. III (1944), The segmental phonemes of the Peiping dialect. Lg. 20. 28-42. Reprinted in Joos, Readings in Linguistics, 116-123.

Henderson, E. J. A. (1951), The Phonology of Loanwords in some South-East Asian Languages. TPhS. 131-158.

Hockett, C. F. (1947), Peiping phonology. JAOS 67. 217-228. Reprinted in Joos, Readings in Linguistics, 217-228.

Hsü, S. J. (1957), Shih lun Pei-ching hū in te sheng tiao in-wei. (tone phonemes of Pekinese.) CKYW 60. 23-24. 試論北京語音的聲調音位

- Jones, D. (1962), The Phoneme, 2nd edition. Cambridge: Heffer.
- Kao, M. K. (1946), Han-yü chi chung ts'u te yien chiu. (A study of final particles in the Chinese language.) IJCS 31. 81-118. 漢語句終詞的研究
- Kao, M. K. & Liu, T., Fuchow Jen Tsang Yang Hsueh P'u T'ung Hua. (Manual for learning the common language for Fuchow speakers.) Peking.
- Karlgren, B. (1915-1926). Etudes sur la phonologie chinoise. Archives d'etudes orientales 15. Leyden & Stockholm.
- Karlgren, B. (1957), Grammata Serica Recensa. Reprinted from BMFEA Stockholm: 1957.
- Kennedy, G. A. (1951), The Monosyllabic Myth. JAOS 71. 161-166.
- Kratochvil, P. (1962), The role of stress in the syntactical analysis of Modern Peking dialect. AO 30, 147-149.
- Kratochvil, P. (1964), Disyllabic stress patterns in Peking dialect. AO 43. 383-402.
- Kratochvil, P. (1967), On the phonology of Peking stress. TPHS 154-178.
- Kratochvil, P. (1968), The Chinese Language Today: features of an emerging standard. London: Hutchinson University Library.
- Ladefoged, P. (1967), Linguistic Phonetics. Working Papers in Phonetics 6.
- Li, F. K. (1948), The distribution of initials and tones in the Sui language. Lg. 24, 160-167.
- Li, F. K. (1949), Tones in the riming system of the Sui language. Word 5, 262-267.
- Lieberman, P. (1967), Intonation, Perception and Language. M.I.T. Research Monograph No. 38.
- Lo, C. P. (1957), Hsia-men yin hsi. (Phonetics and phonology of Amoy). Academia Sinica Monography A. 廈門音系
- Lü, H. (1947), The tone-sandhi in Tan-Yang dialect. BCS 7.
- Martin, S. E. (1953), The phonemes of Ancient Chinese. Supplement to JAOS 16.
- Medhurst, W. H. (1832), A Dictionary of the Hok-keen Dialect of Chinese. Macao.
- Peng, F. C. C. (1966), Amoy phonology - the phonemicization of the three nasal consonants m n ŋ. AO 34, 411-416.
- Postal, P. M. (1968), Aspects of Phonological Theory. New York: Harper & Row.
- Saunders, W. A. (1963), Six Vowel English. LL 13, 177-187.
- Scott, N. C. (1947-8), The monosyllable in Szechuanese. BSOAS 12. 197-213.

Scott, N. C. (1956), A phonological analysis of the Szechuanese monosyllable.
BSOAS 18. 556-560.

Subbiah, R. (1968), Malay words in Tamil speakers. Proceedings of the First International Conference Seminar of Tamil Studies. Kuala Lumpur.

Tipson, E. (1951), A Cantonese syllabary. (Index to Soothill's Pocket Dictionary incorporating all Cantonese colloquial characters and their meanings.) London.

Tung, T. H. (1948), Hwayang Liangshuiching k'e-chia hua chi yin. (Notes on a Hakka dialect spoken in Hua-yang district, Szechuan). BIHP 19. 81-200.

Tung, T. H. (1957), Hsia-men fang-yen te yin-yün. (Phonology of Amoy dialect.)
BIHP 29. 231-253.

Tung, T. H. (1959), Szu-ko Min-nan fang-yen. (Four Southern Min dialects - Amoy, Chin-Chiang, Lung-ch'i & Chieh-yang). BIHP 30, 729-1042.

Tung, T. H. (1961), Recent studies on phonetics and phonology in Chinese.
Phonetica 6. 216-228.

Wang, W. S. Y. (1967), Phonological features of tone. IJAL 33. 93-105.

Whitaker, K. P. K. (1953), 1200 Chinese basic characters: An adaptation for students of Cantonese of W. Simon's National Language version. With an introduction by W. Simon. London: Lund Humphries.

Wong, H. (1953), Outline of the Mandarin phonemic system. Word 9. 268-276.

Wong, S. L. (1941), A Chinese syllabary pronounced according to the dialect of Canton. Shanghai: